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PUBLIC UTILITIES FORTNIGHTLY . . stands for federal and state regulation of both privately owned and operated utilities and publicly owned and operated utilities, on a fair and nondiscriminatory basis; for nondiscriminatory administration of laws; for equitable and nondiscriminatory taxation; and, in general—for the perpetuation of the free enterprise system. It is an open forum for the free expression of opinion concerning public utility regulation and allied topics. It is supported by subscription and advertising revenue; it is not the mouthpiece of any group or faction; it is not under the editorial supervision of, nor does it bear the endorsement of, any organization or association. The editors do not assume responsibility for the opinions expressed by its contributors.

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ARTICLES

FEATURE SECTIONS

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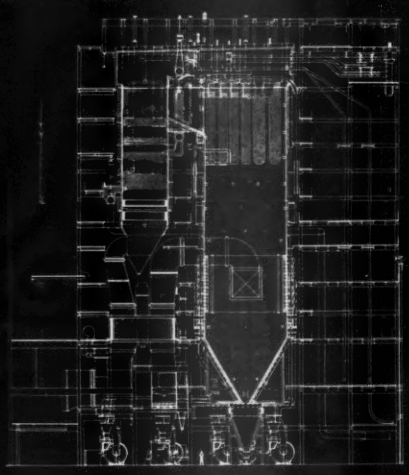
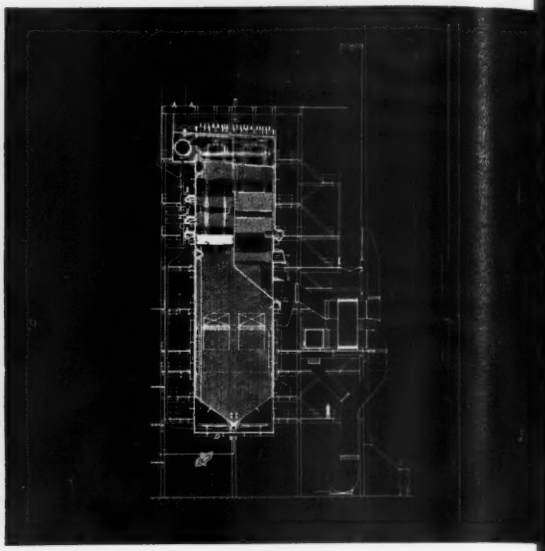
COMBUSTION'S ANNUAL

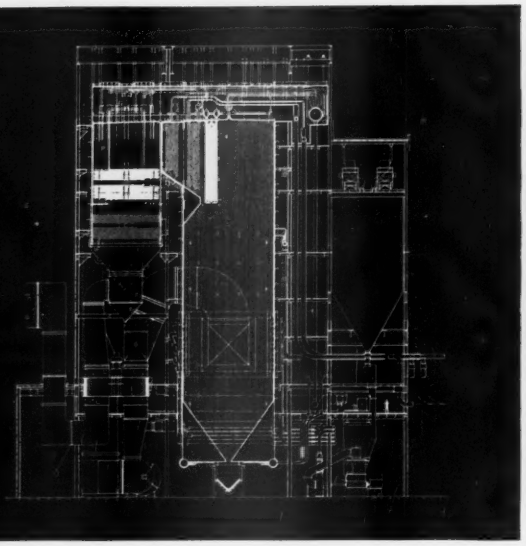
A REPRESENTATIVE CROSS SECTION OF 1960 C-E INSTALLATIONS



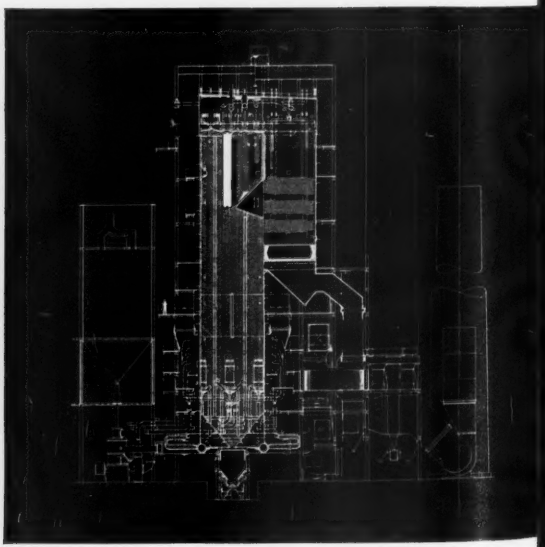
This pulverized coal fired C-E Sulzer Monotube Steam Generator went into service in 1960, at the Eddystone Station of Philadelphia Electric Company. The 325-mw unit is designed to provide steam at 5000 psi with superheat and reheat temperatures of 1200F/1050F/1050F.



This 110-mw unit went into operation at the Ocotillo Steam Electric Station of Arizona Public Service Company. It is a C-E radiant reheat boiler, fired by natural gas and oil, and produces steam at 1925 psi. Superheat and reheat temperatures are 1005F/1005F.



A 500-mw unit was placed in service at the Widows Creek Station of the Tennessee Valley Authority in 1960. It is a C-E Controlled Circulation, radiant reheat boiler, pulverized coal fired, producing steam at 2450 psi. Superheat and reheat temperatures are 1053F/1003F.



This C-E Controlled Circulation, radiant reheat boiler was placed in service at Montrose Steam Electric Station of Kansas City Power & Light Company in 1960. The 156-mw unit, fired by pulverized coal, produces steam at 1925 psi. with superheat and reheat temperatures of 1005F/1005F.

ALL TYPES OF STEAM GENERATING, FUEL BURNING AND RELATED EQUIPMENT; NUCLEAR REACTORS;

STATISTICAL REPORT

In 1960, the electric utility industry placed in service about 10,800 megawatts of new thermal generating capacity.* C-E's contribution to this total was 4,678 megawatts and included two noteworthy firsts. One, a C-E Controlled Circulation unit is the world's first boiler to serve a 500 megawatt turbine-generator. The other represents the most advanced power plant cycle yet attempted. It is a C-E Sulzer Monotube Steam Generator designed to deliver 1200F steam at a pressure of 5000 psi to a 325 megawatt turbine-generator. Both of these units were placed in commercial operation in 1960.

During the year, the electric utility industry ordered approximately 3,700 megawatts of new boiler capacity from C-E. Over 80% of this total is to be served by C-E Controlled Circulation Boilers. More than 60% of the total capacity ordered is for turbine throttle operation of 2400 psi and above. C-E's 1960 order board shows a total of 5 units with capacities of 300 mw and above, including one 500 mw unit.

*Source: "Electrical World"

THE C-E CONTROLLED CIRCULATION STORY

Total capacity ordered, as of year-end 1960	26,300 mw
Total capacity in service, as of year-end 1960	16,421 mw
Capacity ordered in 1960	3,055 mw
Capacity placed in service in 1960	3,108 mw

THE C-E 2400 PSI STORY

Total capacity ordered, as of year-end 1960	12,185 mw
Total capacity in service, as of year-end 1960	6,093 mw
Capacity ordered in 1960	2,250 mw
Capacity placed in service in 1960	2,266 mw

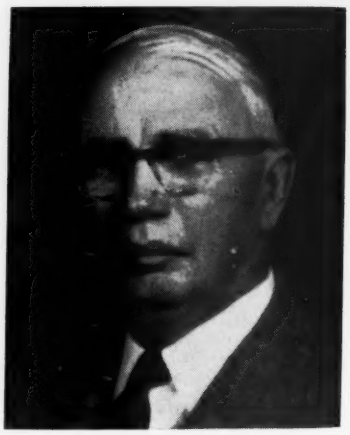
Pages with the Editors

ALTHOUGH the classic decision of the U. S. Supreme Court, which paved the way for regulation of public utilities in the United States, goes back to 1877 (Munn *v.* Illinois), and although the oldest of the federal regulatory commissions —the Interstate Commerce Commission —was created only ten years later, full-powered commission regulation as we know it today is still less than fifty years old. And it was not until 1907, almost a decade after the Supreme Court's decision in Smyth *v.* Ames (1898), that the first full-powered regulatory commissions were set up in New York and Wisconsin.

BEFORE that time both the Interstate Commerce Commission and sporadic attempts of some of the states, such as in Massachusetts, to establish special commissions or boards to look after various types of utility operations (mainly railroad and gas companies) were more advisory than regulatory. In any event, their powers were greatly limited and fell short of the full authority over service and rates which is commonplace today.

IT is remarkable, therefore, that within this period of little more than a half-century so many misapprehensions, myths, and other unwarranted assumptions of an

EVERETT C. MCKEAGE

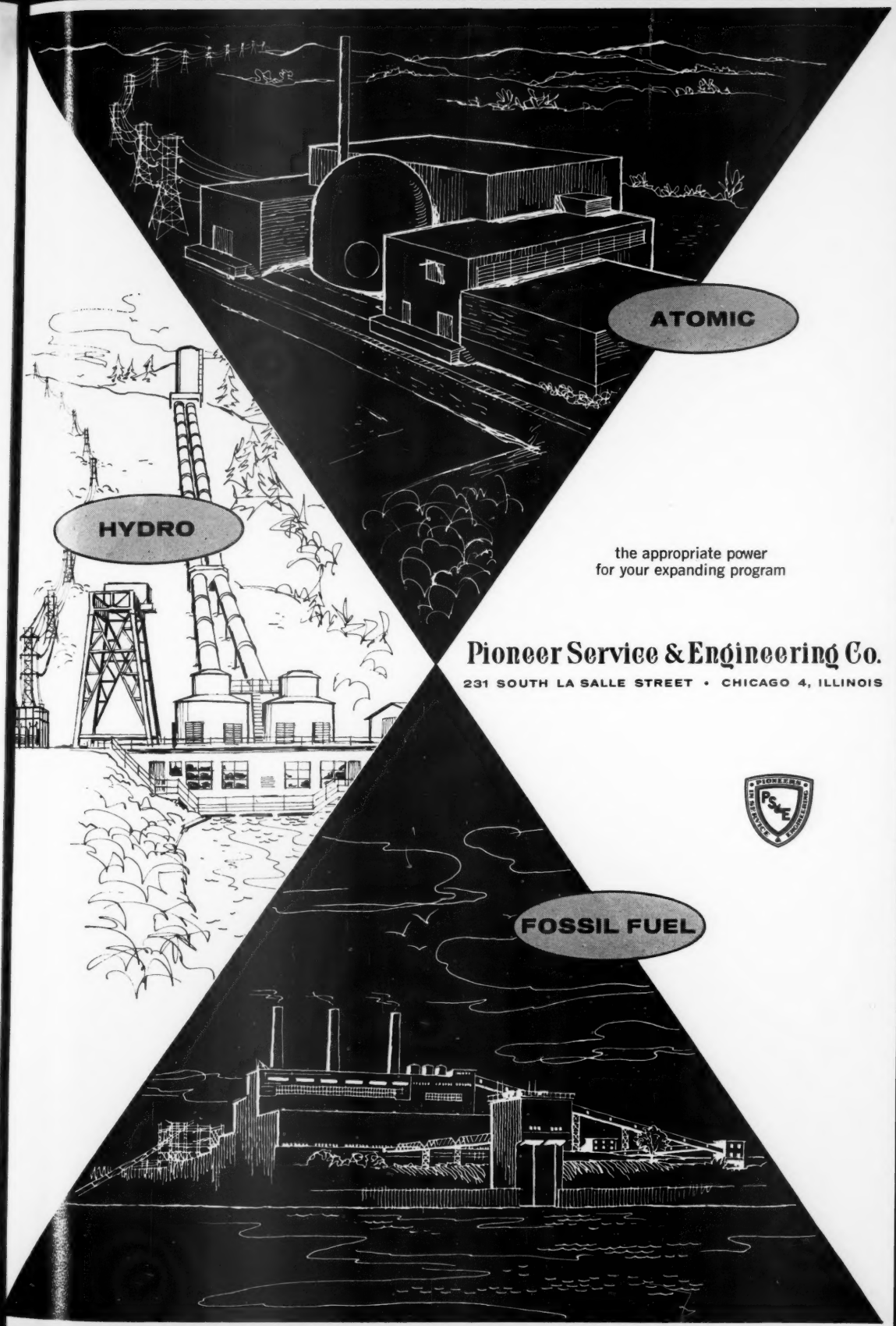


ARTHUR K. LEE

almost legendary character should have grown up. There is no space here to elaborate on such fallacies as the infallibility of experts, the supposedly "guaranteed" rate of return, rate making as a primary if not sole objective of regulation, and other misconceptions. The fact is that they add up to a mischievous amount of things that are not so, the effect of which is to make more difficult the task of the regulator and a clear understanding of what he is supposed to accomplish.

SINCE this is a period of much discussion not only about how to improve procedures and regulations of the regulatory commissions, but also what these agencies were supposed to accomplish in the first place, some analysis of "The Folklore of Regulation" would seem to be timely. The opening article in this issue plows over this well-harrowed ground. It comes to us from a real veteran of regulation who reviews the fundamentals and tells us about the realities as well as the myths of regulation.

PRESIDENT EVERETT C. MCKEAGE of the California Public Utilities Commission, author of this article, draws on his own background of experience in both



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the judicial and regulatory fields. JUDGE MCKEAGE, as he is more popularly known to his many acquaintances in the regulatory as well as the operating utility field, was admitted to the California bar in 1922. He has since been very active in the American Bar Association, as well as the state bar and the bar association of San Francisco where he originally practiced. His first regulatory position was that of attorney for the California state superintendent of banks. Thereafter he became judge of the superior court of California in 1939 and then for more than fifteen years he was chief counsel for the California Public Utilities Commission. He was appointed to the commission itself by Governor Brown in 1959 and was subsequently named president of that board.

* * * *

IN the area of natural gas production particularly—or at least production of gas for sale or resale in interstate commerce—the resistance to submission to federal regulation has been vigorous if not stubborn. Twice Congress has acted to remove the federal controls and twice such legislation has been vetoed at the White House. Today it seems to be assumed that this form of regulation, too, is here to stay.

ONE trouble with lingering dissent to the establishment of regulation (as in the case of gas producers), however sincere and well justified, is that it puts the dissenters at a disadvantage. It is easier to influence the course of regulation from within the house of regulation than to insist on being on the outside looking in. The article on "Introducing Supply and Demand Control for Gas Producer Regulation," which begins on page 369, comes to us from an author who is convinced that such regulation is here to stay and that it is up to the industry to make the best of it by constructive suggestions. This author is ARTHUR K. LEE, who has had forty-five years of experience in production, transmission, and distribution of oil and natural gas. This experience has included promotion, financing, and successful operation, the

CLIFFORD O. THURLOW

last thirty years as president and later chairman of the board of United Cities Gas Company of Chicago, which distributes natural gas to 25,000 customers, in 15 towns and cities in Illinois, Tennessee, North and South Carolina, and Georgia.

* * * *

IMPROVEMENTS in the design and administration of rates can often produce continuing increments of revenue to help offset the effects of inflation and reduce the need for frequent rate increase requests. This approach to proper pricing is the subject of CLIFFORD O. THURLOW'S paper, which begins on page 376. MR. THURLOW has spent more than thirty years on problems involving rate design and administration, cost-of-service analyses, and other related activities. A graduate of the General Motors Institute of Technology, he was with Consumers Power Company from 1926 to 1941. Since 1941, he has been a rate consultant with Commonwealth Services Inc., and its predecessor companies. He is chairman of the National Heating Association Committee on Rates and Regulations, a post he has held for more than ten years.

THE next number of this magazine will be out March 30th.

The Editors

THE POWER TO GROW

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Your investors probably do not know the difference between a transformer d a turbine, but they will appreciate the performance of both as reflected in your earnings state- ent. System dependability is exhibited not only in customer service and satisfaction but in your ofit performance.

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Coming in the Next Issue...

(MARCH 30, 1961, ISSUE)

ELECTRIC UTILITY COSTING—A VALUABLE AID IN RATE MAKING

"Electric utility costing studies" determine the unit investment and expense cost of supplying service in varying quantities at different voltage levels with changes in rates of delivery and time periods and to different rate classes—consisting of many customers with widely varying use habits. Orrin S. Vogel director of economic research, Florida Power Corporation shows how such studies are a source of factual information with which to judge and provide proof of the propriety of any proposed rate or charge affecting the customer's monthly bill for electric service. By use of graphic charts and tables, he demonstrates relatively simple methods for testing "high level costing"—meaning the cost of providing service from the transmission or high-voltage systems—and "low level costing," which takes into account the additional distribution investment cost and low level expenses beyond the point of transmission.

DO GOVERNMENT AGENCIES PERFORM *BUSINESS* FUNCTIONS WHEN THEY PROVIDE ELECTRIC SERVICE?

Earlier this year there appeared in PUBLIC UTILITIES FORTNIGHTLY an article spelling out the difficulties which labor union members, as such, may expect to encounter under government ownership operations in the utility field. The contention was made that when the government retreats behind its own "wall of sovereignty" to engage in what otherwise would be a strictly business enterprise, it is enabled to deal with its employees on a basis which is not farily comparable with the relationship between employers and employees in private enterprise. Following up that thought, A. J. G. Priest, professor of law at the University of Virginia and for many years a partner in the nationally known utility law firm of Reid & Priest (New York city), has raised the question about whether government agencies are performing strictly business functions when they provide electric service.

LAND USE EXPERIENCE NEAR ATOMIC POWER PLANTS

Acquiring or condemning land to be used for or near a nuclear power plant is not the same as routine land acquisitions by a utility company. Safety and protective factors, real and fancied, have created new factors which must be taken into account in acquiring necessary acreage and proper or suitable locations for atomic power plants. Emery C. Dowell of the Pacific Gas and Electric Company has outlined some of the problems along this line which have been encountered.

AND IN ADDITION . . . ***Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.***

Rambler for '61...

American 4-door Super Sedan—For 1961 the Rambler American is more compact *outside*, yet has room for six average adults *inside*. A Rambler American Custom swept to first place over all other compacts in the 1960 Mobilgas Economy Run! Also available in 2-door sedan, 2-door business coupe, 2- and 4-door station wagons.

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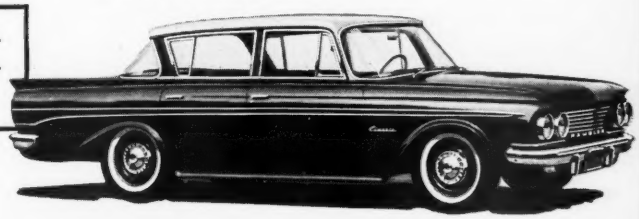

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Remarkable Remarks

"There never was in the world two opinions alike."
—MONTAIGNE

WILLIAM H. GRIMES
Columnist.

"There is just one system which has successfully generated capital. That is the capitalist system; the system which offers the individual the incentive to undertake risks, to profit and to plow back the profits if he is successful enough."

EDITORIAL STATEMENT
The Wall Street Journal.

". . . one of the worst of today's economic problems is monopoly power—the monopoly power no longer of corporations but of unions. The government is doing nothing for the economy by constantly pouncing on businessmen while specifically exempting from anti-trust prosecution the unions that are the true monopolists."

WILLIAM BRADY
Consolidated Edison Company of New York.

"We must remember that if we, the people, want added services and handouts from our governments, city, state, or federal, we, the wage-earning individuals, must pay for them. The thing that each of us, as taxpayers, can do is to pay a good citizen's attention to the economy, efficiency, and practicality of government operations, and make our voices, and our votes, count where they will do the most good."

DON G. MITCHELL
President, General Telephone & Electronics Corporation.

"All too many telephone companies these days are being hit from two directions. First, the rate bases they are allowed are too low, and, second, the amount they are permitted to earn on that low rate base is also too low. It seems to me that all of us in the telephone business must keep hammering home the fact that a telephone company or any other company, regulated or nonregulated, must have adequate earnings if it is to keep on improving and broadening its service. This is the point to keep foremost in mind: Adequate earnings will, in the long run, enable a company to provide *better service* at a *lower price* than would otherwise be possible."

GABRIEL HAUGE
Chairman, finance committee, Manufacturers Trust Company.

". . . approach to the problems of the American economy of the 1960's by resorting to the depression-born ideas of the 1930's is hazardous in the extreme. It inevitably will produce more inflation, discourage savings, and lead to speculative boom conditions that presage the unemployment, business failures, and hardship of the ensuing recession. What the situation calls for is a persistent and strong rise in private savings and the investment of these savings in the tools that modern technology is making available at such an astonishing pace. . . . We must urge strongly and persuasively the need for an independent central bank despite a disposition in some quarters to make the Federal Reserve authorities appear as the original versions of the ugly American."

Utilities Events Calendar

CHECK THESE DATES:

Mar. 16—American Water Works Association, New England Section, will hold annual meeting, Medford, Mass.

Mar. 16-17—Edison Electric Institute, Accounting Division Executive Committee, will hold meeting, Washington, D. C.

Mar. 16-17—Edison Electric Institute, Industrial Relations Committee, will hold meeting, Washington, D. C.

Mar. 16-17—New England Gas Association will hold annual meeting, Boston, Mass.

Mar. 16-17—Oklahoma Utilities Association will hold annual meeting, Tulsa, Okla.

Mar. 16-17—Pennsylvania Electric Association, Street and Highway Lighting Committee, will hold meeting, Lancaster, Pa.

Mar. 16-17—Southern Gas Association will hold distribution and accounting management conferences, Atlanta, Ga.

Mar. 20-21—Tennessee Valley Public Power Association will hold annual meeting, Chattanooga, Tenn.

Mar. 20-22—American Gas Association, General Management Section, will hold annual conference, Charleston, S. C.

Mar. 20-22—Canadian Electrical Association, Western Zone, will hold meeting, Victoria, British Columbia, Canada.

Mar. 20-22—Edison Electric Institute will hold sales conference, Chicago, Ill.

Mar. 20-23—Institute of Radio Engineers will hold international convention, New York, N. Y.

Mar. 20-25—Northwest Public Power Association will hold meter school, Corvallis, Ore.

Mar. 21-23—American Power Conference will be held, Chicago, Ill.

Mar. 22-23—New England Shippers Advisory Board will hold meeting, Boston, Mass.

Mar. 22-24—American Water Works Association, Illinois Section, will hold annual meeting, Chicago, Ill.

Mar. 23-24—Iowa Telephone Association will hold annual convention, Des Moines, Iowa.

Mar. 23-24—Pacific Northwest Advisory Board will hold meeting, Portland, Ore.

Mar. 23-24—Pennsylvania Electric Association, General and Customer Accounting Committee, will hold meeting, Philadelphia, Pa.

Mar. 26-29—American College of Trial Lawyers will hold meeting, New Orleans, La.

Mar. 26-31—Institute of Investment Banking will hold annual session, Philadelphia, Pa.

Mar. 27-28—Mid-West Gas Association will hold annual meeting and convention, Omaha, Neb.

Mar. 27-29—Southeastern Electric Exchange will hold annual conference, Boca Raton, Fla.

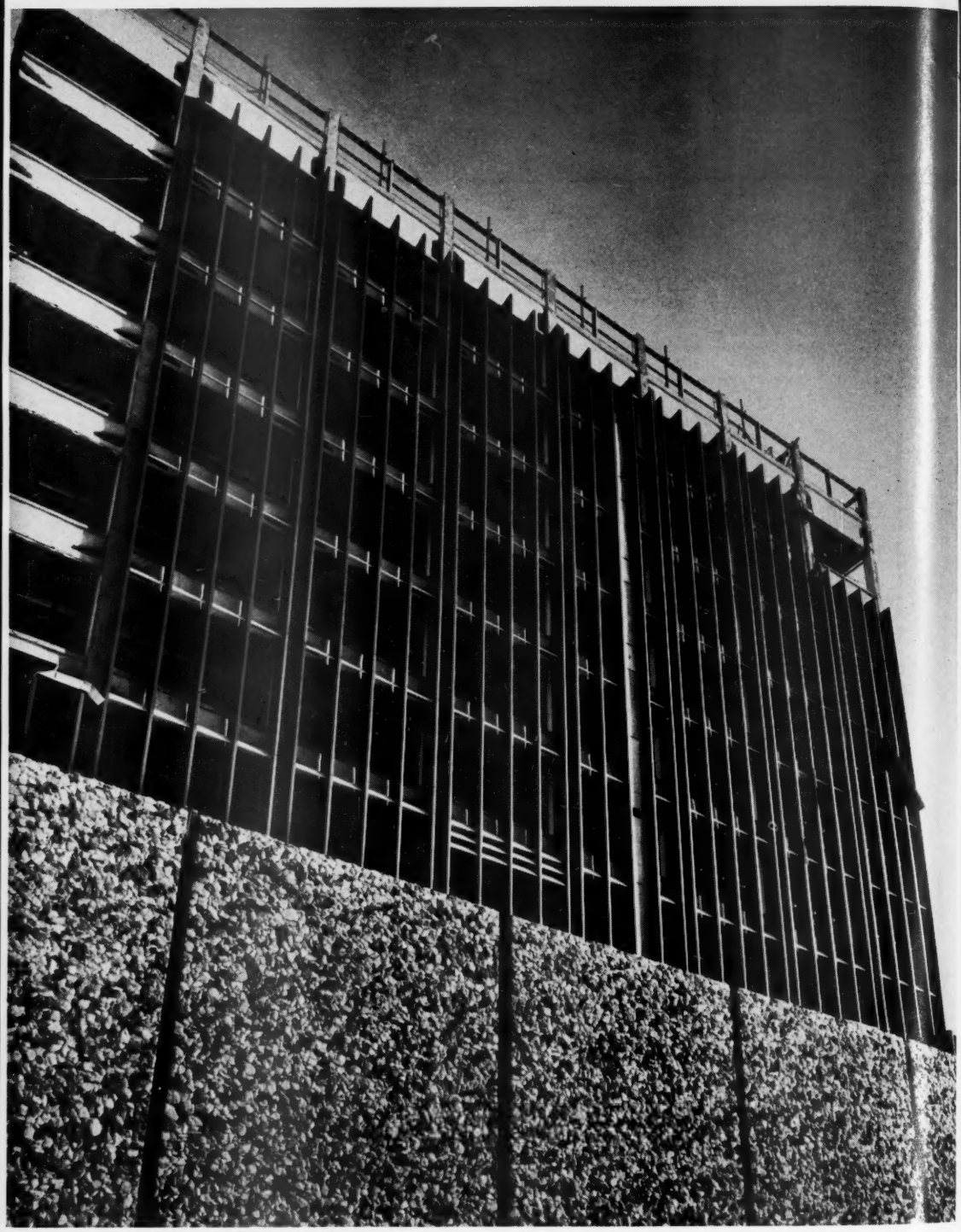
Mar. 27-30—National Association of Refrigerated Warehouses, Inc., and The Refrigeration Research Foundation will hold meeting, San Francisco, Cal.

Mar. 27-31—American Institute of Physics, Instrument Society of America, and National Bureau of Standards will hold symposium on temperature, Columbus, Ohio.

Mar. 28-30—Electric Association of Kansas City will hold biennial electrical supply trade show, Kansas City, Mo.

Mar. 29-30—Southern Shipper and Motor Carrier Council will hold meeting, Charlotte, N. C.

Mar. 29-30—Northwest Shippers Advisory Board will hold meeting, St. Paul, Minn.



Courtesy, Southern California Edison Company

New Long Beach Electric Company Building

This new ten-story building will dominate the downtown Long Beach sky line when it is completed and ready for occupancy by Southern California Edison personnel and other tenants in mid-1961.

Public Utilities
FORTNIGHTLY

VOLUME 67 MARCH 16, 1961 NUMBER 6

The Folklore of Regulation

Drawing upon his own background of experience in both the judicial and regulatory fields, this author differs with some of the implications of the Landis report, especially in the matter of interposing any "supervision" or control by the executive branch of the government which would interfere with the truly independent operation of the regulatory agencies.

By the Honorable EVERETT C. MCKEAGE*
President, California Public Utilities Commission

THE great cartoonist, T. A. Dorgan (the inimitable Tad), had a saying to the effect that the trouble with most of the things you hear is that they are not so. I may say that there is much truth in that statement. A corollary to such statement is that far too many people undertake to form opinions about matters of which they are totally ignorant or concerning which they have only smattering information or a wealth of misinformation.

Mr. Justice Holmes, in the Oddfellows' Cemetery case, offered the thought that the traditions of a community exert a greater influence upon the lives of the people of that community than do the facts of history. Experience of mankind, in my opinion, will support the statement of this great jurist. Of course, the question readily presents itself: Is such fact of life helpful or harmful to a community? I shall let you be the judge.

Some Regulatory Myths

ALL professions or callings of life have their attendant folklore. Regulation has this in abundance. Probably, there are few areas of human endeavor concerning which so much misunderstanding

*For additional personal note, see "Pages with the Editors."

exists or so much misinformation is spread broadcast. The man in the street appears to consider himself qualified to offer opinions upon this complicated subject of regulation.

In this connection, let me make it perfectly clear that, I believe, it is better to have public opinion, uninformed though it may be, concerning governmental operation than to have no public opinion at all. Likewise, I believe it is better to have criticism of public officers, although such criticism may not be of a constructive nature, than to have no criticism at all. This thing is like freedom of speech and press. It must be given full play if our social compact is to remain free. While accepting this principle as the foundation stone of our form of government, it must be admitted that such opinion and criticism should be subjected to the closest scrutiny and the error thereof, if any, pointed out. This is the path of democracy.

Over the years, there have grown up, in the regulatory field, beliefs such as the following: that a two-cent stamp (this originated when first-class postage was two cents) can start a million-dollar rate case; that any citizen possessing horse sense is qualified to be a regulator; that specialists in the field of regulation do not make good regulators; that partisan politics is inherent in and part and parcel of the regulatory process; that regulatory bodies should be supervised by the courts; that, for some unexplained reason, courts are more likely to do justice in the field of regulation than the regulatory bodies; that the granting of a rate increase by a regulatory commission carries with it some implication of favoritism towards the utility and prejudice towards the ratepayer; and I could enumerate many more such beliefs.

I do not say that such views are held by all people, but they are held by a very substantial body of our citizens. Such beliefs, and many others, constitute the folklore of regulation, and the facts of history have not been able to discredit them.

If you will read regulatory history in this country, you will find that it started with a very crude beginning. You will find that regulation has been administered by city councils, boards of aldermen, boards of supervisors, state legislatures, mayors of cities and towns, governors of states, courts, and, more generally now, by regulatory commissions, or a regulatory commissioner, the members of which are elected by the people or appointed by some officer or agency of government. The overwhelming tendency during the last fifty years has been towards the regulatory commission consisting of three or more members. Most every segment of government has had a hand in regulation.

The Legislative Nature of Regulation

If there is one irrefutably established fact about regulation, it is *that regulation is legislative in nature.* However, some of the regulatory commissions in the state and federal fields are both legislative and judicial because of the fact that judicial power, in addition to legislative power, has been deliberately conferred upon them. The California Public Utilities Commission is an example, as

is, also, the Federal Trade Commission and some of the other federal regulatory bodies. Equally true is it that the regulatory process is no part of the executive branch of government. The decisions of the supreme court of California and the Supreme Court of the United States have established this legal fact beyond question.[1]

Of course, if the people or the legislative branch of government should desire to confer regulatory authority upon the executive branch of government by proper legislative and constitutional authority, that delegation of authority could be made. The regulatory duties of the Secretary of Agriculture and the Secretary of the Interior are examples, in the federal field, of such delegated regulatory authority. The executive branch of government has no inherent authority in the regulatory field. Nor has the Executive any inherent authority to establish policy concerning the natural resources of the nation. This policy is for the Congress. Such policy making may be delegated to the Executive by the Congress, within lawful limitations.

Executive Interference Undesirable

THE provision in the federal Constitution and in many of the state constitutions that the Executive shall take care that the laws are faithfully executed gives no warrant for the Executive to invade the domain of the legislative and judicial branches of the government. Unless appropriate constitutional or legislative provisions delegate regulatory authority to the executive branch, it has no authority in that field. The fact that the Executive nominates or appoints members of regulatory agencies creates no more authority for the Executive to interfere with these agencies than with the courts whose members the Executive, in many instances, nominates or appoints, as is the case in the federal jurisdiction.

THIS subject is treated in detail by the Supreme Court of the United States in the Humphrey case. The following excerpts from the court's unanimous opinion involving the attempt by the Executive to remove, at pleasure, a member of the Federal Trade Commission are illuminating:

> The debates in both houses demonstrate that the prevailing view was that the commission was not to be *"subject to anybody in the government but . . . only to the people of the United States," free from "political domination or control," or the "probability or possibility of such a thing"; to be "separate and apart from any existing department of the government — not subject to the orders of the President."*

[1] Pacific Teleph. & Teleg. Co. *v.* Eshleman (1913) 166 Cal 640, 650, 655-6, 658, 689; San Jose *v.* Railroad Commission, PUR1917E 689, 175 Cal 284, 288, 290; People *v.* Western Air Lines (1954) 42 Cal2d 621, 630; Humphrey *v.* United States, 295 US 602, 625-8, 79 L ed 1611, 1617-9.

More to the same effect appears in the debates, which were long and thorough and contain nothing to the contrary. While the general rule precludes the use of these debates to explain the meaning of the words of the statute, they may be considered as reflecting light upon its general purposes and the evils which it sought to remedy. Federal Trade Commission *v.* Raladam Co. 283 US 643, 650, 75 L ed 1324, 1330, 51 S Ct 587, 79 ALR 1191.

Thus, the language of the act, the legislative reports, and the general purposes of the legislation as reflected by the debates, all combine to demonstrate the congressional intent to create a body of experts who shall gain experience by length of service—a body which shall be independent of Executive authority, *except in its selection* [emphasis by the court], and free to exercise its judgment *without the leave or hindrance of any other official or any department of the government.* To the accomplishment of these purposes it is clear that Congress was of opinion that length and certainty of tenure would vitally contribute. And to hold that, nevertheless, the members of the commission continue in office at the mere will of the President, might be to thwart, in large measure, the very ends which Congress sought to realize by definitely fixing the term of office. (Emphasis supplied.) (Humphrey *v.* United States, 295 US 602, 625-6, 79 L ed 1611, 1617-8.)

The Federal Trade Commission is an administrative body created by Congress to carry into effect legislative policies embodied in the statute, in accordance with the legislative standard therein prescribed, and to perform other specified duties as a legislative or as a judicial aid. *Such a body cannot in any proper sense be characterized as an arm or an eye of the Executive. Its duties are performed without Executive leave and, in the contemplation of the statute, must be free from Executive control.* In administering the provisions of the statute in respect of "unfair methods of competition" —that is to say in filling in and administering the details embodied by the general standard—*the commission acts in part quasi-legislatively and in part quasi-judicially.* In making investigations and reports thereon for the information of Congress under §6, in aid of the legislative power *it acts as a legislative agency.* Under §7, which authorizes the commission to act as a master in chancery under rules prescribed by the court, *it acts as an agency of the judiciary.* To the extent that it exercises any executive function—as distinguished from executive power in the constitutional sense—*it does so in the discharge and effectuation of its quasi-legislative or quasi-judicial powers, or as an agency of the legislative or judicial department of the government.*" (Emphasis supplied.) (Humphrey *v.* United States, 295 US 602, 628, 79 L ed 1619.)

The Humphrey case was strongly followed by a unanimous court in the case of Wiener *v.* United States, 357 US 349, 2 L ed 2d 1377.

The Landis Criticisms

KEEPING the foregoing-cited principles in mind, let us analyze the recently

made charges of misconduct, inefficiency, and feet-dragging of certain of the federal regulatory agencies contained in the report rendered to President Kennedy by James M. Landis, former dean of the Harvard Law School. That Dean Landis is authorized to speak with authority on the subject of regulation, no one should doubt.

He has had practical experience in the federal field of regulation.

In this, Dean Landis is in an entirely different class than many who carelessly and ignorantly attack the regulatory process. Some of these uninformed critics remind me of the recruit in the Army who, after two or three months of service and after learning some of the slang of the barracks and some of the old Army tales, undertakes to masquerade as an old soldier. Regrettably, it is true that there are those who become members of regulatory bodies who know nothing of regulation and who continue to occupy that vacuous status after many years of service, so far as fundamental concepts of regulation may be concerned.

The charges made by Dean Landis are matters of common knowledge to those acquainted with the federal regulatory process, particularly to those appearing before the federal regulatory agencies criticized. The existence of these shortcomings is a matter of long-standing fact. While I substantially agree with the charges made in this report to the President, I do not draw all the inferences and implications therefrom which Dean Landis does.

In all fairness, I must say that these federal regulatory agencies are not in a class by themselves. They are no better or no worse than many other agencies of government. Based upon more than twenty years' service in public office, both state and federal, seventeen years of which service has been in the regulatory field and the remainder as a judicial officer, I assert that there would be very few public offices or agencies which could withstand a searching investigation without the revelation of inefficiency or misconduct or the subjection to ridicule or obloquy. And this would be true whether the office or agency be legislative, executive, or judicial.

Many years ago, I made the following statement concerning the regulatory-administrative process, and I affirm that statement is as true today as it was then:

> The cry for reform in the administrative process (I agree that there is abundant room for such reform) applies with the same cogency and emphasis to the courts and all other public agencies and offices. If one doubts this, let him read the reports issued by bar associations, congressional and legislative committees, and reports and resolutions of civic bodies and groups. There, you will find criticism and pleas for reform in abundance.

No Judicial Monopoly on Integrity

COURTS are no freer of shortcomings than are regulatory agencies. One of the great differences is that the latter are subjected to much more official scrutiny than are the courts and, therefore, we hear more about their admitted shortcomings. Let us not forget Judge Martin Manton of the United States court of appeals and that federal judge who had a price list. However, the shortcomings of other governmental agencies and officers should not deter us from proceeding with needed reform in the regulatory process.

One of the best statements concerning effective reform in the regulatory field was made by the *Sacramento Bee* in an editorial appearing in its December 29, 1960, issue:

> . . . the simple but basic fact is that these bodies can be no better than the men who serve on them. That is the heart of the matter.

You could philosophize about the subject for years, and add very little to that editorial statement of the *Sacramento Bee*.

PLEASE do not understand that I am contending that improved regulatory statutes are not needed—they are. What I am trying to say is that, unless you put into regulatory office able and qualified men, all the efficient statutes in the world will be of little help. I heartily agree with Dean Landis that qualified men must be placed on these regulatory agencies, and to get these qualified men, better salaries and improved tenure of office must be provided.

If these reforms can be accomplished, the problem will be solved as far as humanly possible.

The Burden of Executive "Supervision"

ONE of the recommendations in the Landis report, in my opinion, would not be in the public interest. That is the recommendation that these federal regulatory agencies be placed under the supervision, scrutiny, or monitorship of a representative of the executive branch of the federal government, although Dean Landis states that the decision-making authority would not be tampered with. *That sort of Executive intervention could not possibly be exerted without grave interference with the adjudicatory process of these federal agencies.*

Communications from the President or his agent, no matter how well-intentioned, would take on importance so great that they would pervert the adjudicatory action of these bodies. Human experience conclusively proves that this would be the case. Without lawful warrant, we

saw a representative of a President misuse these federal agencies. What do you think would happen if the representative of the President were clothed with lawful warrant to interfere with these agencies? I shall let you draw your own conclusions.

WHAT is needed in the field of federal regulation—a reform referred to by Dean Landis—is a Regulatory Conference, similar to the Judicial Conference in the judicial field of the federal government and in other jurisdictions. There would be an administrative office under the jurisdiction of the Regulatory Conference which would be charged with the duty of surveying the field and of calling to the attention of the conference inefficiency and misconduct in these federal agencies. This conference would be empowered to take corrective action. Such a reform would go a long way to remedy the present inefficient and laggard situation now existing in some of these agencies.

No Czar for Regulation

I CAN think of no greater tragedy that could befall federal regulation than to place these regulatory agencies under a czar or overlord in the executive branch of government.

Another of our folklore beliefs regarding regulation is that it, effectively, may be *streamlined,* a much abused and misused word. This statement has been made so many times that it has come to have wide acceptance throughout the country. Bear in mind that "efficient" and "streamlined" are not convertible terms. But before I go into this "streamlined" business, let me point out some stubborn facts of life. The jurisdiction and work load of these federal regulatory agencies, like most all other regulatory agencies, have been tremendously expanded and increased. *The Landis report recognizes this increased work load as the chief cause of the delays in the federal regulatory field.* Unlike the courts, whose membership has been greatly increased, these regulatory agencies, for the most part, have had little or no increase of membership, although the staffs of these agencies have been expanded.

The federal jurisdiction is an excellent example of what I have just pointed out. The membership of the federal agencies, for the most part, has not been increased since their creation, although their jurisdiction and work load have greatly increased. The membership of the federal courts has been greatly increased, or, in the case of the Supreme Court of the United States, considerable of its jurisdiction has been transferred to other courts or has been made discretionary.

ANY attempt to streamline the regulatory process will run head-on into the facts of history, not to say the facts of life. It may well be that the regulatory process should not have been permitted to blossom as much as it has, but

the fact is that judges and lawyers, by failing to assume the leadership in this field, have been greatly responsible for the regulatory process becoming the gargantuan thing it is today. Probably it is too late to change the direction of this immense governmental activity.

The Difficulty of Regulatory Reform

ADDITIONALLY, *one must ever bear in mind that reform in government is doubly difficult because of politics.* I do not use the word politics in any derogatory sense because I assert that the political process is the process of a democracy. It is the only way a government of the people, by the people, and for the people may operate. It is inherent in our type of government that it is not as efficient as a centralized or consolidated form of government. *This lack of totalitarian efficiency is a small price we pay for local autonomy and a free society.*

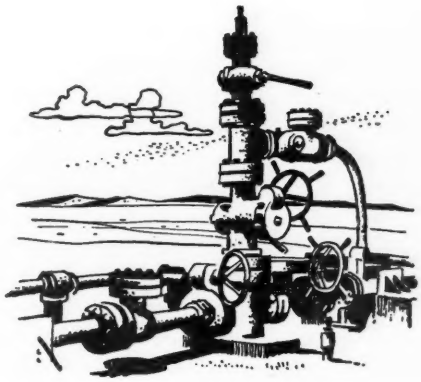
I do not offer these things as excuses for not operating government reasonably efficiently and in the public interest, but I do point to them as basic facts of life which no free government will ever dispense with. Therefore, I offer the thought that we must not expect too speedy reform in any of our governmental processes because a nation such as ours proceeds slowly in reform and upon the basis of history and experience.

DURING the more than seventeen years that I have been associated with regulatory agencies, I have learned some modicum of humility. Many who first become associated with a particular agency of government are apt to jump at conclusions as to what is wrong with the agency and as to what should be done to reform it. I must confess that I suffered from that sort of attitude. Over the years, experience has taught me that democratic processes grow and that time is a great teacher. One who has not a full comprehension of the field which lies ahead may be excused for impatience.

Neither the regulatory process nor the judicial process can be hurried; otherwise, justice, as we understand it, will not be done. By the use of police state methods, we can "streamline" anything, but that does not mean that justice will be done. In order to do justice, both the law and the facts must be *explored and understood.* There can be no possible substitute for this type of due process of law. To be sure, proceedings before regulatory agencies and before the courts may be hurried and decisions may be reached in one-third of the time now required, but I assert such a course *would not produce justice.* I have sat in both the seat of the judge and the regulatory commissioner. Simply stated, there is no substitute for orderly procedures which have as their objective—*justice.*

IN conclusion, I submit that the claimed shortcomings of the regulatory process should not be considered without its concomitant history and experience and, also, to remember that the regulatory agencies of government are not the only agencies of government which have shortcomings. Let us proceed with that wisdom and charity that bespeak an objective view, *with the public interest as the goal to reach.*

Introducing Supply and Demand Control For Gas Producer Regulation



By ARTHUR K. LEE*

Congress can, in the opinion of this author, make a single change in the Natural Gas Act which will eliminate the shifting of gas pipeline costs from industrial, inferior, or dump users to residential or firm users through the present two-part rate arrangement. Only if this is done, in this author's opinion, will gas reserves prove adequate for future demand.

BEGINNING with testimony before a Senate committee in 1955 and since then by letters to Congress and published articles, I have voiced opposition to release of natural gas producer control. I have contended that the gas supply was sufficient unless pipelines continued the use of the two-part rate to shift gas costs from inferior industrial interruptible and "dump" gas users to residential and other firm customers. Not only has it been continued; it has been accelerated.

And I now propose to show you that unless we very soon stop the practice of mixing the low costs for gas which should have been set aside for the "captive"[1] consumers of those days with the high replacement costs of today, our promised 20-year reserves will approach nonexistence.

The Natural Gas Act of 1938 was passed to stop the unfair charges for both gas and transportation thereof by the few short interstate lines previously built. The scarcity of both materials and labor preceding and during the war years caused little real pipeline development to be attempted until the late forties, but in the early fifties the advantage in financing by receiving utility classification created a building splurge which has con-

*Chairman of the board, United Cities Gas Company, Chicago, Illinois. For additional personal note, see "Pages with the Editors."

[1] Here used in the sense that large investments in purchase and installation of gas appliances keep consumers "captive" as long as gas costs do not become unbearable.

tinued with greater or less intensity to this day.

UNDER the Natural Gas Act any new construction must be authorized by a certificate of convenience and necessity, issued by the Federal Power Commission. That commission early decided that to protect the proposed consumers especially, and investors generally, applicants must show not only financial responsibility but, more important, the ownership or contracted availability of a gas reserve sufficient to supply the demands of estimated consumers for a 20-year period. To this extent our government, or at least the commission, promised those investing in gas-burning equipment and securities to build and expand lines, that it would use its best efforts to maintain such 20-year reserves and ensure that they were not dissipated.

The Federal Power Commission has in later years granted expansion certificates in some cases upon a showing of less than a six-year deliverability. I think most consumers and investors will agree that no new main sales lines should be authorized for any pipeline unless it can at the same time show control of 20-year reserves for previous authorizations, with assurance prohibiting future divestment, as has occurred in at least one case in the past.

A Review of FPC Authorizations

THE table on page 371 is constructed to show the authorizations (certificates of convenience and necessity) issued by the Federal Power Commission each year, the construction expenditures under preceding authorizations, and the cost of a 20-year gas reserve at that time (part, however, subject to escalator clauses which, with increased prices of new commitments, later became operative). Also the quantity of gas which on a 20-year basis *should have been maintained* for each pipeline under those authorizations before issuance of new main-line authorizations. Column 7 shows the yearly "average" wellhead price of all interstate purchases. The corresponding individual pipeline average is the approximate figure at which all pipelines purchased their original reserves, and replacement reserves have cost the approximate figure applying during the year of purchase.

The *average* cost of these reserves, including new purchases, in 1959 was 14.3 cents per Mcf and the *average* cost is the figure used by pipelines in framing their two-part rates to show a profit on low-priced sales. But pipelines are being allowed to purchase replacement gas for as high as (automatic price policy) 21.5 cents, with applications pending for 24.7 cents and more, and an average of new commitment gas of at least 18 cents to 20 cents per Mcf. Thus there is a built-in loss to pipelines of four cents or more per Mcf, which residential and other firm sales must pay "to keep pipelines busy" before starting to pay their own just charges.

Now let us have a look at Table I.

MAY I call your attention to columns A and B. The increase of actual intrastate sales was only 500 million Mcf from 1951 to 1959 as against 4,000 million in interstate sales. The threat of intrastate sales beginning in 1954 is proven almost a mirage.

The 20-year reserve (162,000 million Mcf) for all the authorizations at prices prevailing the year issued would cost but $12 billion. However, at present *average* prices, the cost has mounted to $20 billion, and at present new commitment prices $30 billion would have to be paid. When I predicted in testimony before the Senate Interstate and Foreign Commerce Committee June 2, 1955, that release of production control would in the next twenty-three years provide a "windfall" of $16 billion for owners of then known reserves, producers termed the statement ridiculous.

This reserve, 162,000 million Mcf, is 99 per cent of the December 31, 1959, total estimated recoverable reserve, *much of which is at present* economically inaccessible. And if authorizations have been or are issued for the construction estimated by the American Gas Association for 1961 and 1962, there will be a 50 million Mcf reserve deficit. Much gas *at a price* will undoubtedly be found, but sales must also soon be "at a price."

The Various Purposes of Gas for Resale

IN 1958 I made an exhaustive study of consumer use of interstate sales of gas and it was apparent that 21 per cent was sold for resale interruptible use and 23 per cent to ultimate consumers (direct sales). The latter may not be strictly inter-

TABLE I

NATURAL GAS RESERVES

		Their Creation and Cost								*Twenty-year Reserve Which Should Be Maintained*				
		*1**	*2**	*3a*	*4*	*5*	*6*	*7*	*8*	*A*	*B*	*C*	*D*	*E**
Preceding	1946	$ 900	$ 500	1,300		900	18,000	5	5	18,000	40,000	20,000	78,000	
Average	1946-50	504	441	1,600	300	500	10,000	* 6.2	6.2	28,000	42,000	20,000	90,000	173,000
	1947	504	441	1,900	300	500	10,000	* 6.2	6.2	38,000	44,000	20,000	102,000	
	1948	504	441	2,200	300	500	10,000	* 6.2	6.2	48,000	46,000	20,000	114,000	
	1949	504	441	2,500	300	500	10,000	* 6.2	6.2	58,000	48,000	20,000	126,000	
	1950	504	441	2,800	300	500	10,000	* 6.2	6.2	68,000	50,000	20,000	138,000	
	1951	471	500	3,200	400	400	8,000	* 7.3	8	76,000	#55,000	#30,000	161,000	
	1952	409	496	3,800	600	400	8,000	* 7.8	8.6	84,000	#54,000	#30,000	168,000	200,000
	1953	725	680	4,200	400	600	12,000	* 9.2	10.6	96,000	#54,000	#30,000	180,000	211,000
	1954	451	394	4,700	500	400	8,000	# 9.9	12	104,000	#52,000	#30,000	186,000	212,000
	1955	663	592	5,100	400	600	12,000	#10.6	13.5	116,000	#56,000	#30,000	202,000	224,000
	1956	548	704	5,600	500	500	10,000	#11.3	15	126,000	#60,000	#30,000	216,000	238,000
	1957	385	753	6,000	400	300	6,000	#12	16.5	132,000	#63,000	#30,000	225,000	246,000
	1958	622	715	6,300	300	600	12,000	#13	18.5	144,000	#62,000	#32,000	238,000	254,000
	1959	1,202	694	7,200	900	900	18,000	#14.3	21.3	162,000	#65,000	#34,000	261,000	263,000
										162,000	65,000	34,000	261,000	263,000
Totals		$8,896	$8,233				162,000							
Forecast	1960	** 787	* 900	7,900					23					
	1961		* 700	8,500					24					
	1962		* 900	9,200					25					

*—*Gas Facts*, except first line. a—Bureau of Mines, after 1951. #—Bureau of Mines, as computed by Gas Information Service. **—Actual just released. *1*—Interstate transmission lines authorized by FPC in millions. *2*—Interstate construction authorized by FPC in millions. *3*—Shipments through interstate lines in millions Mcf (1,000 cubic feet). *4*—Actual annual increases in shipments-millions Mcf. *5*—Increased shipments for which 20-year reserve should have been provided. (Authorizations preceding 1959 $7.5 billion. Nineteen hundred and fifty-nine shipments 7.2 billion Mcf, or roughly one billion Mcf per $1 billion authorization.) *6*—Twenty-year reserve to protect authorization in millions Mcf. *7*—Average wellhead price in five states exporting over 90 per cent of interstate sales in cents per Mcf. *8*—Average wellhead price of new commitments in cents per Mcf. *A*—Interstate in millions Mcf, cumulated from Column 6. *B*—Intrastate in millions Mcf. *C*—Field use in millions Mcf. *D*—Total reserves to be maintained. *E*—Estimated recoverable reserves.

ruptible and doubtless are not, because practically the same volume is sold each month of the year. But as they contribute not a dollar of profit to jurisdictional operations, and interruptible users only agreed to take gas when available, neither should have pre-emptive claim upon reserves or costs.

If no interruptible or direct sales had been made in 1959, only 4,100 million Mcf would have been required. That is 600 million less than were sold in 1954. So is it not reasonable to say that other consumers, needing no additional gas, would still be buying gas costing not over 9.9 cents per Mcf instead of 14.3 cents if the interruptible business had been lost by increase to a fair price? And is it not reasonable to say that when pipelines are permitted to use gas purchased at 6.2 cents or more, years ago, to average down costs to produce a book profit which largely benefits nonjurisdictional users and which should really constitute a loss, they are treating other customers unfairly?

It may be contended that if this gas for direct and interruptible load had not been purchased, there would have been a deficit peak-load supply. This is not a fact. The winter load of around 140 million Mcf per month now being sold to direct customers would have covered that.

A comparatively simple change will introduce the law of supply and demand to gas purchases, make ineffectual the two-part rate, and cause its replacement by a common sense transportation charge (the real business of any pipeline). It can create a basic automatic approval producer price, perhaps by districts, do away with confused, complicated, and technical arguments and legal proceedings, and ultimately reduce pipeline rate hearings to simplified actual line cost operations, effective only after approval. The old principle for nondepreciable merchandise, termed "lifo" (last in first out) can and should to a reasonable extent be used.

A Simple Change—A Big Difference

An outline of the remedy I suggest is this:

> By law or commision action provide that no natural gas shall be sold by any interstate pipeline at less than the average cost of the highest-priced one-third[2] of gas purchased by it during the preceding year plus one-half the average transportation charge for firm gas transported during that year. The transportation charge for firm gas shall equal, with zoning variations, the difference between the projected gas costs for the ensuing year and the amount necessary after payment of all approved expenses to create a fair and reasonable return.

This change will stop the purchase of gas by pipelines at a price greater than it can be sold for after paying a reasonable transportation charge. The two-part rate was promoted to produce sales of low-priced gas when there seemed to be a bottomless ocean of gas in comparison with use. We passed from a buyers' to a sellers' market in the middle fifties and from here on our thinking must be of conserving gas instead of increasing the market for cheap gas.

[2] Suggested portion of interstate sales which will probably enter into effective price competition.

TABLE II

CONDENSED STATEMENT OF 1959 INTERSTATE GAS SALES, WITH ESTIMATED SEGREGATION OF SALES BY CLASSES, ACTUAL LATE COMMITMENT INSTEAD OF AVERAGE COSTS, ESTIMATED SALES PRICES, AND BALANCES REMAINING FOR TRANSPORTATION CHARGES AND PROFITS

	Purchase			*Sale*		*For Transportation And Profit*	
	Million Mcf	*Per Mcf.*	*Dollars*	*Per Mcf*	*Dollars*	*Per Mcf*	*Dollars*
Interruptible ...	1,500	18¢	270,000,000	22¢	330,000,000	4¢	60,000,000
Direct	1,700	18¢	306,000,000	25.5¢	433,500,000	7.5¢	127,500,000
Residential and Other Firm	4,000	11.3¢	453,600,000	39.4¢	1,576,500,000	28.1¢	1,122,900,000
Total	7,200	14.3¢	1,029,600,000	32.5¢	2,340,000,000	18.2¢	1,310,400,000

TABLE III

SUGGESTED PLAN
SAME FOOTAGES, COSTS, AND TOTALS
(18 + 12)

Interruptible ...	1,500	18¢	270,000,000	30¢	450,000,000	12¢	180,000,000
Direct	1,700	18¢	306,000,000	30¢	510,000,000	12¢	205,000,000
Residential and Other Firm	4,000	11.3¢	453,600,000	34.5¢	1,380,000,000	23.2¢	925,400,000
Total	7,200	14.3¢	1,029,600,000	32.5¢	2,340,000,000	18.2¢	1,310,400,000

Presuming that in 1959 the sales for interruptible and direct use continued at 44 per cent, let us compute two tables for comparative purposes. In Table II the only change from present two-part rate procedure is to show cost price of this 44 per cent (3,200 million Mcf) at estimated recent commitment cost of 18 cents (actual probably nearer 20 cents). Table III is computed on the same volume, the same cost prices, but giving effect to my suggested restriction of minimum-priced sales.

I REPRESENT that these volumes and costs are sufficiently accurate to present

an approximately correct comparison. As the same volumes and total dollars are used in both tables, it is apparent that in the "test year" (1959) under the present system around $200 million of costs was being transferred from interruptible and direct consumers to residential, commercial, and firm industrial, and that residential consumers were paying seven times as much for transportation as were interruptible. The book profit of $60 million on the interruptible sales, should these be 100 per cent lost, is far more than offset by the value of the conservation of that gas for the future. The loss of direct sales would really be helpful to residential consumers, as direct sales pay no part of overhead profits. The two-part rate has outlived its usefulness.

The "End Use" Factor Approved

THE U. S. Supreme Court in its January 23, 1961, decision approving the Federal Power Commission's consideration of end use, quoted the statement of a 1940 Power Commission as follows:

> . . . while at the same time rapidly depleting the country's gas reserves. Although for a period of perhaps twenty years, the natural gas could be so priced as to appear to offer an apparent saving in fuel costs, this would mean simply that social cost, which must eventually be paid, has been ignored.

An important producer change must, however, be made to make this pipeline rate change workable.

In the forties gas was so plentiful and worthless that producers were glad to accept any offer, with or without minimum takes. As pipelines began to be constructed, producers, fearing that their neighbors would be paid for gas drained from their acreage, began to insert clauses under which the pipelines must agree to take various minimums each day or month, or be penalized by payment for the deficit (now spoken of as "take or pay").

At about the same time producers began to demand various escalator clauses. These provided for increasing prices if variously higher rates were paid by the same or other pipelines for gas in the same areas, even though their costs were not necessarily increased. The chief concern of the producer today is to maximize Mcf prices and make sure that part of his gas is not withdrawn through wells on his neighbors' land. Of course, every producer wishes to convert his inventory of gas into cash as rapidly as he can do so at a reasonable price.

The Rôle of Congress

IT will be necessary, therefore, in order to place in operation the above suggestion, for Congress *in the public interest* to modify or rescind all "take or pay" clauses, prohibit new ones, and, in lieu thereof, provide an equitable pro rata take not only as between neighbors but also as between all districts or areas connected to each pipeline. As between pipelines, the take may vary but the variation should be no greater than at present. It might, however, be possible equitably to arrange a variation for producers who desired to sell seasonal gas for interruptible use only, and to rescind escalator clauses which in any year exceed the highest third of all purchases.

Another change which should be made is to transfer all direct (nonjurisdiction-

al) sales by pipelines to the jurisdictional classification, to be governed by the same rules as all other sales. They contribute nothing to line operation except actual out-of-pocket costs and these costs are figured on average instead of replacement gas cost.

PRESENT Federal Power Commission regulation of wellhead prices involving exploratory allocations as between gas and oil, and allocations of expense of dual production wells, together with many of the other cost items and allocations, can well lose much of their importance and reasonable automatic approval standards become possible. This will be because new purchases will not be made by pipelines which will increase the upper third average to a point where a new commitment cannot be sold with a reasonable transportation charge added.

Repeal U. S. Gold-backing Provision?

"THOUGH we cannot put gold back on its past pedestal, we most certainly cannot ignore its present message. Gold is still the stern voice of monetary discipline. For some time now it has been proclaiming the need to keep our money sound and to put our balance-of-payments position in order. . . .

"We have been losing gold at a brisk rate—not to speculators, not to nervous hoarders, but to governments and central banks of countries that have piled up dollar claims against us. They have continued increasing their dollar holdings, still showing confidence in our currency. But, as our negative balance of payments keeps providing them with dollars, they inevitably cash some of them for gold.

"Thus our massive gold supply—still nearly half the free world monetary total—buys us time in which to cure the stubborn imbalance in our international transactions. It buys us time, but it will not buy us an eternity—we must press vigorously on with every sensible measure to correct soon the deficit in our foreign payments. . . .

"We have to work from the bedrock up—move forward with our technology, get rid of growth barriers in our tax structure, sharpen our competitive abilities in world trade, walk the straight line of monetary and fiscal integrity. . . .

"Along with protecting our store of gold, we should make clear —to our own people and to the world—what our gold is for; namely, for making international settlements, not for redeeming our currency and deposits. . . . Nearly $12 billion worth is set aside as a reserve against something it cannot be used to redeem.

"Repeal of the 25 per cent gold-backing provision would be a logical step in the further improvement of our international monetary framework."

—HENRY C. ALEXANDER,
Chairman of the board, Morgan Guaranty Trust Company of New York.

Improved Rate Design Is Preferable To Frequent Increases

Some practical suggestions for audit and control of rate schedules and administration which can, in this author's opinion, prove far more useful, flexible, and convenient than the more drastic process of seeking authority for rate increases.

By CLIFFORD O. THURLOW*

PROPER pricing is perhaps the most important single factor affecting any public utility's success. Little margin for error exists in such a closely regulated field. Skillful design of the rate structure can sometimes produce continuing increments of revenue—thereby partially offsetting the effects of inflation. This reduces the need for frequent rate increases involving extensive outlays of time and money—a desirable accomplishment in the eyes of both management and the regulatory authorities.

A sound rate structure must be solidly based on full consideration of factors affecting the cost and value of the service as well as on economic trends, patterns of load growth, technological advances, customer acceptance, and many other factors.

Effective rate administration also is a prime requisite of the utility pricing function. It assures the utility of all revenues that the rate structure was designed to produce—and promotes healthy customer relations.

Effective Rate Design

A BASIC requirement is that rates be compensatory. Too often the pricing of service has been based on comparisons with other companies without regard to their particular costs and condi-

*Senior consultant, Commonwealth Services Inc. New York, New York. For additional personal note, see "Pages with the Editors."

tions—or on an arbitrary judgment basis. Modern cost-of-service analysis procedures and machine data processing have greatly simplified the problem of proper pricing, not only for existing loads, but also for new loads anticipated in the foreseeable future.

Cost-of-service analysis is not an inflexible indicator of proper pricing, however. Sometimes, for historical or other reasons, rates cannot immediately be brought into line with the pricing format indicated by a cost-of-service analysis. With respect to existing sales, they do, however, furnish an invaluable guide to management, both as to the current pricing of service and as to desirable corrective measures to be taken over a period of time as conditions permit. They also may serve as an effective guide to pricing service to new loads, thus avoiding overpricing with a consequent failure to obtain a full measure of the potential business—or the underpricing of the service with a consequent deficiency in earnings. Cost-of-service analysis is finding rapidly increasing favor in the industry—for managerial guidance—because of the constant pressure of inflation on earnings, and the rapid development of new loads.

VALUE of the service, customer acceptance, and willingness to pay, may be affected by many considerations. The demagogic pronouncement that utility service is a monopoly—without competition—is highly erroneous. The electric utility competes with the gas utility in many areas. The electric utility must vie with customer-owned generation equipment. The gas utility usually has strong competition from the oil and coal industries for various markets.

The customer's choice may depend solely on the dollars-and-cents cost of the competing products or service. Many times, however, other factors enter in. Cleanliness, ease of control, space requirements, reliability, and cost of maintenance, etc., influence the customer's choice. Even the basis of billing may be a factor. For example, some customers elect to use a fuel other than electricity or gas for home heating, because that fuel can be purchased on a budget basis—at a fixed price per month over a ten- to 12-month period—while many utilities bill their service on the basis of the variable quantities actually used from month to month. Continuous analysis in co-operation with the sales or marketing department of the competition and the many other factors affecting the value of the service and of the potential markets is needed for the determination of proper pricing to the end that a full share of the available business may be obtained, and that earnings will be at a satisfactory level.

Pipeline and Power Cost Factors

CONSTANTLY changing trends and relationships, both within and outside the utility industry, must be studied for their possible effect on the pricing and market for utility service. For example, the recent upward trend in the cost of pipeline gas, coupled with a reduction in the price of heavy fuel oil, obviously would affect the competitive relationships of the two fuels. This could be especially critical with respect to markets for interruptible gas service. The upward trend of utility wage costs for the past several years has exerted a different kind of effect on rate relationships. Because wage

costs make up a larger part of the total costs of serving residential and small commercial customers than they do for large industrial customers, larger increases in rates for residential and small commercial service than for industrial service have been necessary in many instances.

Another factor which has affected the relationship between rates for small and large electric consumers is the trend of generation costs. Improvements in generation plant efficiency have helped keep down the increase in the cost of serving large customers where production costs are a major item of expense. They have had little effect in offsetting other increases in the cost to serve small users, however. Many other economic changes may affect costs both for the utility and its competitors. They require constant reappraisal from both a rate and a sales promotion standpoint.

PATTERNS of load growth should be given the utmost consideration if effective rate structures are to be achieved. Reference to "Statistics of Electric Utilities in the United States—FPC," for the year 1958, reveals that during the ten-year period 1949 to 1958, inclusive, the number of electric customers served by class A and B utilities increased 39 per cent. During the same period the number of kilowatt-hours sold increased over 116 per cent and the number of kilowatts of generating capacity installed—which is somewhat indicative of the increase in customers' capacity requirements—increased about 150 per cent. *It seems apparent from the foregoing that a rate increase pegged either to the number of kilowatt-hours purchased or the customer's capacity requirements would have had greater continuing or long-range beneficial effect than would a revision dependent upon growth in number of customers only for its continuing effect.*

Reference to the distribution of bills and kilowatt-hour sales to residential customers for various representative electric utilities shows that less than 5 per cent of the bills rendered are for 50 kilowatt-hours per month or less. The kilowatt-hours included in these bills generally aggregate less than 1 per cent of the total kilowatt-hours sold. It seems apparent from the foregoing that any continuing beneficial effect of a rate increase which resulted solely from increased charges for the first 50 kilowatt-hours per month or less would be nominal. Even an increase of 100 per cent in the kilowatt-hour sales to this small segment of the customers would have relatively little effect on total revenues.

Example of Rate Design

HOW effective rate design, giving consideration to growth trends and the distribution of bills and sales, can provide greater continuing benefits is shown by

the following illustration. In the interest of simplicity, this example compares the revenues which would be obtained from an individual customer as determined under Rate 1 (original rate) and Rates 1-A and 1-B (revised rates). The further assumption is made that the customer used 100 kilowatt-hours per month at the time the revised rate became effective. The typical residential-type rates used for the illustration are as follows:

Monthly Kwh. Blocks	*Energy Charge Per Kwh.*		
	Rate 1	*Rate 1-A*	*Rate 1-B*
First 20 kwh. or less	$1.00	$1.10	$1.10
Next 30 kwh.	4.0¢	4.5¢	4.0¢
Next 50 kwh.	3.0¢	3.0¢	3.3¢
Over 100 kwh.	2.0¢	2.0¢	2.1¢

Under Rate 1, the bill for 100 kilowatt-hours is $3.70. Each of the "revised" Rates 1-A and 1-B would provide a bill $3.95 for use of 100 kilowatt-hours; that is, they would each provide an immediate increase in revenue of 25 cents per month or a 6.7 per cent increase over the "original" rate. Likewise, the bill under either of the "revised" rates would be 25 cents greater than under the "original" rate for each new customer using 100 kilowatt-hours that was added.

EACH of the "revised" rates, therefore, provides the same end result as the other *if there is no increase in kilowatt-hour use. They also have the same potential for benefit from growth in number of customers only.* Here the similarity in results ends. Under "Revised Rate 1-A" as the customer's use increases, the increase in revenue over what would have been obtained under the "original" rate (No. 1) remains a constant amount dollarwise ($0.25) and is a constantly decreasing amount percentagewise. Under Rate 1-B with increased customer usage, the differential or increase over the bill if computed under the "original" rate becomes increasingly greater dollarwise and the attrition in the increase percentagewise is nominal. These continuing benefits, of course, would also accrue from the addition of new customers using 100 kilowatt-hours per month or more.

The comparative effect of the two bases is further illustrated by the tabulation shown below.

OBVIOUSLY Revised Rate 1-B, which produced the same dollar increase at the outset as did Rate 1, has the far greater potential for continuing revenue benefits in a growing economy. *This rate then is more likely to postpone the time when further rate increases must be sought—certainly a desirable characteristic.*

The foregoing example uses for the purpose of illustration a rather obvious solution to what is a relatively simple problem under the circumstances indicated. Frequently, the areas in which price changes can be made most beneficially will not be so readily discernible—but they must be found if the most effective rate structures are to be achieved.

Kwh. Per Month	*Original Rate 1 Net Bill*	*Revised Rate 1-A*			*Revised Rate 1-B*		
		Net Bill	*Increase Over Rate 1 Amount*	*%*	*Net Bill*	*Increase Over Rate 1 Amount*	*%*
100	$3.70	$3.95	$0.25	6.76	$3.95	$0.25	6.76
200	5.70	5.95	0.25	4.39	6.05	0.35	6.14
300	7.70	7.95	0.25	3.25	8.15	0.45	5.84

Technological changes and advances, both as they affect customer usage and as they affect utility operations, should be analyzed regularly for their possible effect on rate structure. Automation has changed the pattern of use for some customers substantially. The relatively new fast recovery type electric water heater obviously has different load characteristics than does the older so-called standard type of heater. Rates often must be revised to meet these new conditions of use adequately. Load testing provides a useful tool for determining what type of rate revision will be most appropriate. Technical advances in metering, such as relatively low-cost demand meters or dual register meters, may offer new avenues for effective promotion and pricing of sales.

The Customer Acceptance Factor

It is generally agreed that customer acceptance is of extreme importance to an effective rate structure. How is it attained? There is no fixed formula. The elements involved vary from case to case. Human psychology and proper co-ordination of public relations' factors play an important part. Historical background—the type and level of rates to which the customer is accustomed—economic conditions—many other factors may affect customer acceptance. The effect of any one or all of these factors is seldom subject to a precise determination. Consequently, decisions to a large extent must be based on good business judgment. Broad experience in rate design and administration is invaluable in reaching appropriate and acceptable decisions.

The proper timing of rate changes is of great importance. Improvement and modernization of rate structures need not be deferred until a general overhaul of rate structures is undertaken. Frequently, adjustments can be made more expeditiously on a piecemeal basis—one rate or one class of service at a time. Usually, where adjustments are made on a piecemeal basis, there is a smaller volume of preparatory work necessary and consequently less disruption of the company's day-to-day operations. Smaller groups of customers are affected so the company can more readily explain its position and customer misunderstanding can thus be

avoided. Regulatory approval of the changes may be expedited. Also, rates may thus be kept more in step with changes in use characteristics, potential or developing markets, etc.

SINCE use characteristics are constantly changing and new markets are being opened, continuing rate studies are essential to effective rate design. Some companies that have failed to keep abreast of such changes have found themselves selling service for a new load at inadequate prices which had to be increased at some later date. While there can be no guaranty that rates will remain constant, certainly there is great opportunity for adverse customer reaction if, after a customer has purchased an appliance, the operating cost is raised substantially above the amount on which the purchase was predicated. This may be true despite the fact that the increase is fully justified and that the higher cost, if known at the outset, would not have deterred the customer from purchasing the appliance.

Other companies have overpriced service for new loads with the result that the market did not develop normally. Where such a situation is not corrected, the full potential of the market may never be developed and, at best, the development will be slowed with a consequent loss in revenues. It is situations such as these which continuing rate studies can anticipate and help prevent through prompt adjustment of the affected rate or rates. Even in the face of rising costs, if a prompt adjustment of rates is necessary to accommodate a new market, it may be desirable to give consideration to reducing the rate slightly (on the basis of existing business). Rate changes which produce reductions in revenue frequently receive more prompt approval from regulatory authorities. If approval can be expedited, then a nominal decrease in revenue may be a small price to pay for an adjustment which will properly price sales to a new market.

EFFECTIVE rate structure requires that it be promotional. It is not enough to merely increase volume of sales, however. The primary purpose of increased sales should be to improve the overall earning position. Several years ago when costs of new plant, wages, etc., were relatively stable, unit costs trended downward as volume of sales increased—incremental costs were substantially lower than average costs. Under today's inflationary conditions the downward trend of unit costs has been slowed or reversed.

Increased volume of sales no longer assures an improvement in earning position. In fact, *it is entirely possible for a company to lower its earning position through sales effort* unless its rates are designed to accommodate themselves to present-day *economic relationships*. Effective pricing does not depend entirely upon the dollars-and-cents charge per unit of service, however. Rate design which will improve system load factor may be equally important. For example, a rate structure which would improve system load factor for an electric utility by 10 per cent could conceivably result in an improvement in rate of return of as much as 1 per cent.

Effective Rate Administration

ALL too often a sound rate structure is not as effective as it should be because of faulty administration. Revenues

are lost and discriminatory situations arise through improper rate interpretation and application. This situation may be most common to and most serious for larger companies with several operating divisions. It is to be found in small companies too—where misapplication of rates to even one sizable account may have a substantial effect percentagewise.

Organizational patterns vary widely between companies. So too does the direct responsibility for rate application. A common and usually acceptable practice of utilities is to assign these duties to the customers' accounting section or to the sales department. It is not to be expected that such people will have as much experience and training in rate matters as will the rate department employee whose principal duties and experiences are in the field of rates. Consequently, many companies have found periodic review of rate policies and practices helpful in eliminating discrimination in rate application and in improving earnings.

AVOIDANCE of differences in rate interpretation and application requires centralization of authority—probably in the rate department. It usually is the function of this central authority to establish the company's rate policy—subject to the approval of top management. It also will serve as a clearinghouse for questions as to interpretation and application. When rate changes are being made, instruction meetings for the people actively engaged in applying the proper rate to each class of service will help promote uniformity of procedures. Similar meetings for the periodic review of policy and practices also may be desirable.

The furnishing of instruction cannot in itself assure complete uniformity of practice. Human nature being what it is, differences in understanding and interpretation seem inevitable.

A PERIODIC review or audit of rate application to individual customers can be a useful tool for discovering and correcting any incorrect practices that develop. Such rate audits should be conducted by someone experienced in rate administration and who has a thorough understanding of the company's rate policy. Generally it is found sufficient to review only a small sample of the so-called mass accounts billed under relatively simple rate forms—the residential class, for example. Where more complex rate structures are in use and for classes of customers whose characteristics vary widely, a more complete review may be desirable. One hundred per cent coverage of major accounts such as the industrial class usually is warranted. The rate audit is basically a review of records and information available within the company's office.

However, in some instances, field in-

vestigations may be necessary to fully develop the facts. Sometimes, too, rate audit procedures are broadened to include related factors, such as independent audits of meter constants, billing methods and accuracy, etc. The breadth of the investigation should, of course, be tailored to the needs of the particular company.

THE rate audit in itself serves primarily to disclose situations which need correction. Recommendations for corrective measures are sometimes given orally while the audit is in progress but, of course, should be set forth in the audit report also. Generally, it is desirable to review the report with the person actively engaged in and directly responsible for rate application and administration or his supervisor. Sometimes follow-up investigations to ascertain whether recommended changes have been made may be desirable.

Rate audits may be made by company personnel or by consulting firms. The use of consulting firms has the advantage of providing an outside viewpoint and may result in lower cost than if a full-time staff is maintained by the company.

Conclusion

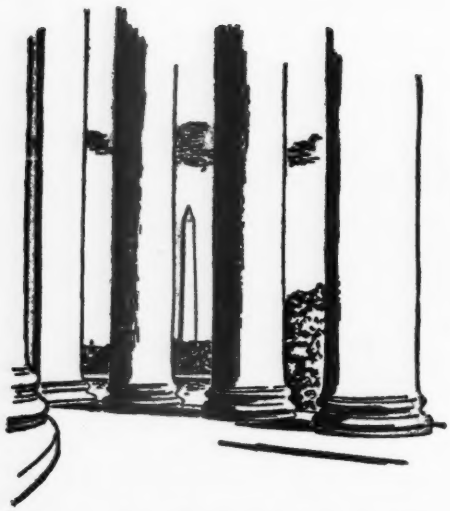
DEVELOPMENT of a sound rate program requires the direction of a person with broad experience who can fully evaluate the many factors involved. To be fully effective it also must be properly administered and co-ordinated with an effective sales program. Cost-to-serve studies and market studies will serve as excellent guides to both rate and sales policies. Rate audits will facilitate effective rate administration. These basic requirements, together with the other modern tools available for control, study, and analysis, can point the way to effective and proper pricing to assure improvement in earnings without frequent rate increases.

Talking, Thinking, Acting Computers in 1961

COMPUTERS, which now talk to each other in elementary language, will be upgraded this year so that they can talk, think, and act, according to E. T. Clare, vice president for sales and service of the Kin Tel Division, Cohu Electronics, Inc., San Diego, California. He said computers located at Cape Canaveral, Florida, are now "talking" via telephone lines to computers in San Diego, reporting information in digital form for technical analysis.

Through programing developments expected this year, the San Diego computers will provide limited result-type intelligence not only to the San Diego engineers but immediately back to engineers at Cape Canaveral.

"In science and education," Clare stated, "I foresee in 1961 the development of large technical information storage centers in 14 major U. S. cities. All types of technical information will be received, stored, digested, translated, and transmitted for use of universities, engineers, scientists, and industrial technicians."



Washington and the Utilities

Kennedy Natural Resources Message

On February 23rd President Kennedy submitted to Congress a blueprint for a vastly expanded and accelerated program for developing the country's natural resources. In a 3,500-word special message, the President revived an old campaign issue of interest to electric utilities when he said: "We reject a 'no new starts' policy for flood-control and power projects." Such a policy, the President said, "denied the resource requirements and potential on which our economic growth hinges" and took a heavy toll in added costs and even human life and homes by postponing essential flood-control projects.

Mr. Kennedy sounded a note of urgency as he outlined his general proposals for executive as well as legislative action in carrying out the program, which he said should include redoubled efforts to convert sea water into water fit for human and industrial use. He said the country "will be in trouble in a short time" if it fails to chart a proper course of conservation and development.

No overall price tag was placed on the program which an administration expert said was "addressed to the needs" of the country. He described it as "a more positive attitude, a stepped-up effort" in resources development. But in one recommendation alone—federal assistance for state and interstate water pollution control agencies—the President's program called for an increase of $75 million over the $50 million recommended for this work by the Eisenhower administration. Details of legislation required to carry out the program, it was explained, will be submitted to Congress later.

At a briefing explaining the provisions of the message, an administration spokesman said the Kennedy forces were standing by the campaign charge. He said the previous "no starts" policy was reversed by the Democratic-controlled Congress and the Eisenhower administration merely went along with it.

Mr. Kennedy said he had directed the Budget Bureau and agency heads to schedule "a progressive, orderly program of starting new projects to meet accumulated demands, taking into account the availability of funds" and other fac-

tors. The President said he would issue shortly executive orders setting up machinery within his administration to co-ordinate resources policies. He said he will set up under his Council of Economic Advisers, a presidential advisory committee on natural resources, and directed the Budget Director in consultation with agencies concerned to formulate an overall plan within ninety days for fees, permits, and other user charges on all types of federal resource projects.

The President said he also wanted the Budget Bureau "to re-evaluate current standards for appraising the feasibility of water resource projects." He also urged Congress to: (1) authorize planning commissions for all major river basins "where adequate co-ordinated plans are not already in existence," thus carrying out a special Senate committee's proposal "to develop comprehensive river basin plans by 1970, in co-operation with the individual states"; (2) permit the government to reserve "known future reservoir sites" when necessary to prevent "uninhibited commercial and residential development in such areas"; and (3) have the Senate approve the Columbia River Joint Development Treaty with Canada "to permit an immediate start on the immense efforts that can be jointly undertaken in power projection and river control in that basin."

With regard to electric power, Kennedy said he had ordered the Interior Department to plan for "national co-operative pooling of electric power, both public and private; and to enlarge such pooling as now exists." In addition, he said hydroelectric power will be included in all multiple-purpose river projects where the greatest economic use of the water justifies it. The Tennessee Valley Authority "will continue to use the financing authority granted it by the last Congress to meet the power needs of the area it serves." Efforts will be encouraged to achieve economically competitive nuclear power before 1970 in areas where coal and oil costs are high. In marketing federal power, sales preference will be given public agencies and co-operatives; domestic and rural consumers will have priority over other consumers; power will be sold at the lowest possible rates consistent with sound business principles; power disposal "shall be such as to encourage widespread use and to prevent monopolization."

National Fuels Policy Bill Advances

Probably as the result of recent differences between House Speaker Rayburn (Democrat, Texas) and Representative Smith (Democrat, Virginia) the House Rules Committee has cleared the national fuels policy bill. Similar bills have heretofore been pigeonholed by the important House group. Following the close vote expanding the size of the Rules Committee in order to hasten clearance of bills sought by the administration, Rules Committee Chairman Smith has been considering bills without limitation, including those not favored by House Speaker Rayburn. The fuels policy bill is supposed to be one of these.

The House Rules Committee on February 23rd recommended that the House set up a special 15-man committee to study "fuel and energy resources" of the United States. Members would be named by Speaker Rayburn. The newly enlarged committee, with one member absent, approved the study proposal on a 9-to-5 vote after rejecting, by the same count, a plan under which the fuels policy study would

have been made by a joint committee of the House and Senate.

The action was a partial victory for Speaker Rayburn, who won control over the Rules group, through extra appointments, in a bitter fight that tied up the House for weeks at the start of the current session. "Mr. McCormack (Representative John W. McCormack, House Democratic leader), Mr. Albert (Representative Carl Albert, Democratic whip), and I don't like joint committees," Rayburn told newsmen. "We got them to pass a resolution setting up a 15-man House committee."

THE committee's action on fuels followed an overnight change of heart by Representative Wayne N. Aspinall (Democrat, Colorado), who first asked for a joint committee study but who earlier introduced a revised resolution under which the study would be made by a House group. The action also followed a committee discussion of House *versus* joint committee inquiries, in which members noted that in joint ventures Senators usually wind up getting all the glory. The discussion was on a proposal by Representative Clement Zablocki (Democrat, Wisconsin) to create a joint committee to investigate intelligence work. A decision on this was delayed.

Columbia Basin Repayment Inquiry

INTERIOR Secretary Udall scheduled a meeting for March 8th with the Columbia Basin Commission "to expedite the solution of repayment problems of the Columbia basin reclamation project." Udall said he had asked Under Secretary James K. Carr to arrange the meeting and he had written Governor Albert D. Rosellini proposing the March 8th meeting. The letter explained that President Kennedy has been made aware of the project situation by the two Washington Senators.

The Columbia basin repayment problem involves a reclamation *versus* power users' controversy. The fight was echoed in Congress during the 1960 session when a delegation of water users came to Washington for a special hearing before the House Irrigation Subcommittee of the Interior Affairs Committee. They attempted unsuccessfully to get approval of legislation granting a moratorium on all drainage charges. Udall was a member of the subcommittee.

Udall's recently announced views on government power and reclamation policy have drawn fire in Congress. House Interior Committee chairman, Representative Aspinall, suggested during hearings last month that Udall inform his department's public relations people that Congress, not Interior, makes government policy. Aspinall said his advice was prompted by "two new enunciations" from Udall's department that "indicate that you are going to make policy."

THE new Secretary had announced an 18-month moratorium on applications to buy public lands. Earlier he sharply revised Eisenhower administration policy, declaring that he will promote public power development rather than "partnership" with private firms. Although Udall issued both announcements, Aspinall diplomatically directed his censure at Interior Department "publicists" rather than at the Secretary himself. Udall nodded agreement with Aspinall's suggestion but said nothing more about it. Udall's visit to the committee was simply to introduce Interior staff to committee members. He promised that a number of new projects would be recom-

mended and that the committee may not like all of them.

Political Angle on Plant Site Denied

THE Wrightsville Beach, North Carolina, saline water conversion plant has been reconfirmed by Secretary of Interior Udall. Secretary Udall indicated that the Wrightsville site had been selected by the Eisenhower administration in an "eleventh-hour" policy decision and that the new administration thought it necessary to review the matter. In reaffirming the selection, Secretary Udall pointed out that the competition among East coast cities had been very keen.

Final confirmation of the site was said to be based upon technical factors, demonstration value, and the assistance offered by the state and community. No reference was made to charges that the plant site choice was held up pending recent politically critical voting on the House of Representatives Rules resolution. The present Secretary of Commerce, Luther Hodges, while governor of North Carolina, spearheaded a drive which resulted in a gift of seashore property for the plant and a pledge of $200,000 to prepare the site. Governor Sanford, who succeeded Hodges, has also indicated his approval of the project.

New Bonneville Chief Hints Policy Changes

THE new Bonneville Power Administration Administrator, Charles F. Luce, says that "$30 million lost over the spillways" of the Columbia river during periods of low-power demand last year is that agency's immediate problem. Luce told a press conference that California is a likely customer but that in any agreement there should be iron-clad guaranties that the Northwest would have priority during peak demand periods. The "primary responsibility of the federal government for construction of large multipurpose projects will be a guiding principle of the new administration." Libby dam on the upper Columbia (the main dam involved in the recent Canadian-American treaty signed by chief executives of each country and awaiting Senate approval) and the Lower Monumental dam project on the lower Snake river were cited as projects which are very much in the Bonneville picture.

LUCE issued a list containing the following additional points in Bonneville's new program: (1) BPA will support completion of the dual-purpose nuclear reactor under construction at Hanford, Washington, with power-generating facilities. (2) BPA will testify before Senate committees, if this should prove necessary, on behalf of the Canadian treaty for development of the upper Columbia. (3) All regional intertie possibilities will be carefully examined and promoted if they seem wise. Luce refrained from stating a position on proposals for a federal corporation to raise power project funds by selling revenue bonds to the U. S. Treasury, saying that he will have more policy statements to make when he returns from a trip to Washington, D. C., soon. He implied that he will confer with Interior Department officials and Senator Neuberger (Democrat, Oregon) on the proposed bill of the Senator which would permit BPA itself to sell revenue bonds. The corporation approach had been spearheaded by her late husband, Richard L. Neuberger.

Telephone and Telegraph

Telpak Communications Approved

THE Federal Communications Commission has approved the tariffs for Telpak, a new broad-band "electronic highway," as filed by the American Telephone and Telegraph Company. The new service is intended to give large business and government communication customers a choice between common carrier services provided by the telephone company and private microwave systems.

The approved tariffs extend only to interstate services; however, intrastate tariffs have been filed in a number of states, including New York and Michigan. The rates approved depend upon which of four types of Telpak service the customer chooses. These are: (1) Telpak A—a 12-voice channel, $15 a month per air-line mile. (2) Telpak B—24-voice channels, $20. (3) Telpak C—60-voice channels, $25. (4) Telpak D—240-voice channels, $45. Terminal charges depend on the equipment used. These include telephone, telegraph, facsimile, teletypewriter, data transmission, and telemetering.

The advantage of this system to the telephone industry is in the meeting of competition from private microwave systems. These private systems do not have the right of interconnection with common carrier telephone systems. It is understood that the private systems are now taking this matter up with the Federal Communications Commission. The private microwave systems, however, claim superior flexibility and better economy for the customer using such facilities under certain conditions.

All Number Calling

THE Chesapeake & Potomac Telephone Company of Maryland has recently outlined its plan to switch from letter-numeral dialing to "all number calling" (ANC). In place of the two letters and five numerals in use today, the ANC system substitutes seven numerals. For example, LE 9-9900 will become 539-9900.

The continued growth of direct distance dialing has brought about the need for a system such as ANC. When direct distance dialing was introduced in 1947, the United States and Canada were divided into numbering plan areas, with a three-digit code for each area. In every direct distance dialing area each telephone must have a number different from every other telephone number. Thus, when an area runs out of numbers, it has to be divided and another numbering plan code

assigned. ANC provides 800 central office codes for each numbering plan area, compared with approximately 540 available when central office names are used. Another advantage of the all-numeral system is the avoidance of errors due to the confusing of the letter "O" with the numeral zero and the letter "I" with the numeral one.

Chesapeake & Potomac officials have stated that ANC has become a part of the company's long-term planning and will be introduced in Maryland beginning May 1st. The gradual shift to ANC will begin with new applications for telephone service.

Dictionary of Telephonese

THE government has always been accused of wrecking the English language. No one can deny that Washington has spawned some jaw-breaking names, which, for convenience, have been abbreviated to initial letters which mean not a thing to those on the outside. When several of these abbreviations are used in one sentence—be it written or spoken—the effect can be startling.

Then, too, each segment of the government seems to develop its own linguistic shorthand and a recent article in *The Northwestern Bell Magazine* indicates that the same process goes on in the telephone industry. In an article entitled "Dictionary of Telephonese," the magazine states:

> "Telephonese" is the language of the land of Bell. A complicated tongue, its dialects originated in the company's different departments; and like any language, new words constantly replace those fallen from usage. Used by those who can understand it, Telephonese speeds conversation. But it only confuses when used with those who don't understand—people from other departments, associates outside the business, and customers.

The listing goes from "ABHL" (after hours listing for a business phone) to "XB" (extension bell for a telephone). The article observes that this glossary should enable the telephonian to get through most conversations with English-speaking people and vice versa.

ALTHOUGH done in good humor, this dictionary does point up the fact that trade lingo very often means absolutely nothing to the uninitiated. "DA" may mean that the operator does not receive an answer, to a telephone employee, but to the average American it conjures up pictures of the district attorney. The moral would seem to be that "telephonese" is a fine language when spoken with "telephonians" but it is to be avoided, or at least translated, with those who do not speak the dialect.

House Kills TV Broadcast of Proceedings

THE House Rules Committee has killed a proposal which would have permitted the proceedings of the House of Representatives to be telecast. House Speaker Rayburn (Democrat, Texas) has long been an enemy of this proposal and the new appointees to the recently expanded Rules Committee effectively blocked the sending of the bill to the floor for debate.

Congressman Brown (Republican, Ohio) warned the committee that "a certain percentage" of House members might be slaughtered in the rush to get in front of the cameras, and other members, reacting in a similar light mood,

wondered if make-up would be needed and if the public would counsel on the colors of the lawmakers' ties.

The proposal has been introduced several times and has never received any action. Speaker Rayburn has stated that he has "never been in favor of making a show of the House of Representatives" and this would seem to end the matter for some time to come.

Senators Criticize TV Programs

RECENTLY the Senate Interstate Commerce Committee took up the matter of approving Newton N. Minow as chairman of the Federal Communications Commission. The session, during which Mr. Minow was questioned, turned into a general airing of criticisms by individual Senators of television programs and practices.

The chief complaint of the lawmakers seemed to center around TV westerns and programs featuring crimes of violence. Senator Pastore (Democrat, Rhode Island) asked Mr. Minow if the FCC was going to do something about such programs. Mr. Minow pointed out that the commission would decide to award or renew licenses on the basis of public interest. He indicated that the commission could not do anything if a TV station puts on a bad western program, but if it puts on too many westerns to the exclusion of other types of coverage, the "public interest" factor would come into play when the station's license came up for renewal. This type of question, he indicated, is the proper regulatory concern of the commission.

Senator Monroney (Democrat, Oklahoma) brought up the question of the accuracy of so-called program-rating services. He stated that the samples are too small to be accurate and the industry relies too heavily on them in scheduling programs. Mr. Minow replied that "My own feeling is that they underestimate the taste level of the public. I intend to look into them."

During the hearing there were no specific questions asked regarding telephone or telegraph regulatory activities. The nomination of Mr. Minow received the unanimous approval of the committee.

Short-range Communications Device

MINNEAPOLIS-HONEYWELL has announced a new communications system that uses ray guns to transmit voices secretly and silently. Honeywell engineers said the system consists of sending and receiving units shaped like guns. The principle is not new and was used by the Navy for intraconvoy communication during World War II; but the technique and application are important innovations.

The units are aimed at each other for transmitting a narrow beam of infrared radiation. Anything spoken into the gun is electronically converted into infrared and transmitted to the receiver which converts the message back into sound. Small hand units have been developed which have a range of three miles and larger systems have a 20-mile range. The engineers said the system, called Maxsecom (maximum security communication), cannot be jammed, detected, or interfered with.

Financial News and Comment

By OWEN ELY

Annual Electric Utility Forecasts

CHARLES F. ("CHUCK") HOCHGESANG, editor of the *Electrical World*, recently made his annual talk before the New York Society of Security Analysts, in which he made various forecasts regarding trends in the electric utility industry, and commented on the evident public power bias of the new administration. He presented a number of charts, most of which are reproduced here in condensed form (pages 393 and 395); they show actual 1960 results as compared with the forecasts made a year ago and also forecast the trend for 1961, for various key figures compiled by the industry. He admitted that the forecasts made a year ago had proved a little too optimistic, since the cool summer curtailed air conditioning and the business down turn retarded industrial use of electricity.

DEPARTMENT INDEX

Kilowatt-hour sales by the electric utility industry were up only 6.5 per cent in 1960 against an estimated 9 per cent. The showing might have been a little worse if it had not been for the relative stability of sales to the Atomic Energy Commission, which now takes about 17 per cent of all industrial sales (mainly for use at its gas diffusion plants) compared with 20 per cent five years ago.

WITH the continuing recession he projected an overall gain in kilowatt-hour sales of 6.2 per cent for 1961 compared with an average of 6.8 per cent for the past five years. In forecasting 1961 industrial sales an upward movement was anticipated as likely to occur around midyear which would give an overall 4.4 per cent increase for 1961. The gain will be due to increased use of electricity per industrial customer, since the FRB index is expected to drop from last year's 108 to an average of 104 in 1961. Industry in a recession cuts its most efficient and economic plants last.

Residential sales last year gained 8.9 per cent, and the forecast proved about right; for 1961 the increase is set at 8.5 per cent, making allowance for a poor showing as to housing starts and appliance sales. The projection is based on an estimated gain in annual customer usage

of 226 kilowatt-hours compared with 230 in 1960.

The average kilowatt-hour rate for residential customers is estimated at 2.47 cents compared with 2.48 cents in 1960, continuing the long period of decline due to the use of promotional rate schedules. The commercial load follows the residential fairly well, with an average five-year gain of 8.2 per cent. (Last year's increase was 7.2 per cent against a predicted 8.9 per cent.)

REGARDING long-term forecasts of kilowatt-hour output (see Chart 8), the forecasts made by the Federal Power Commission, Edison Electric Institute, and *Electrical World* vary rather widely, especially after 1965. We calculate that the average annual compounded rate of growth for the 21-year period works out at 7.5 per cent for the *Electrical World* forecast, 6.5 per cent for the EEI, and only 5.3 per cent for the FPC. Mr. Hochgesang stated:

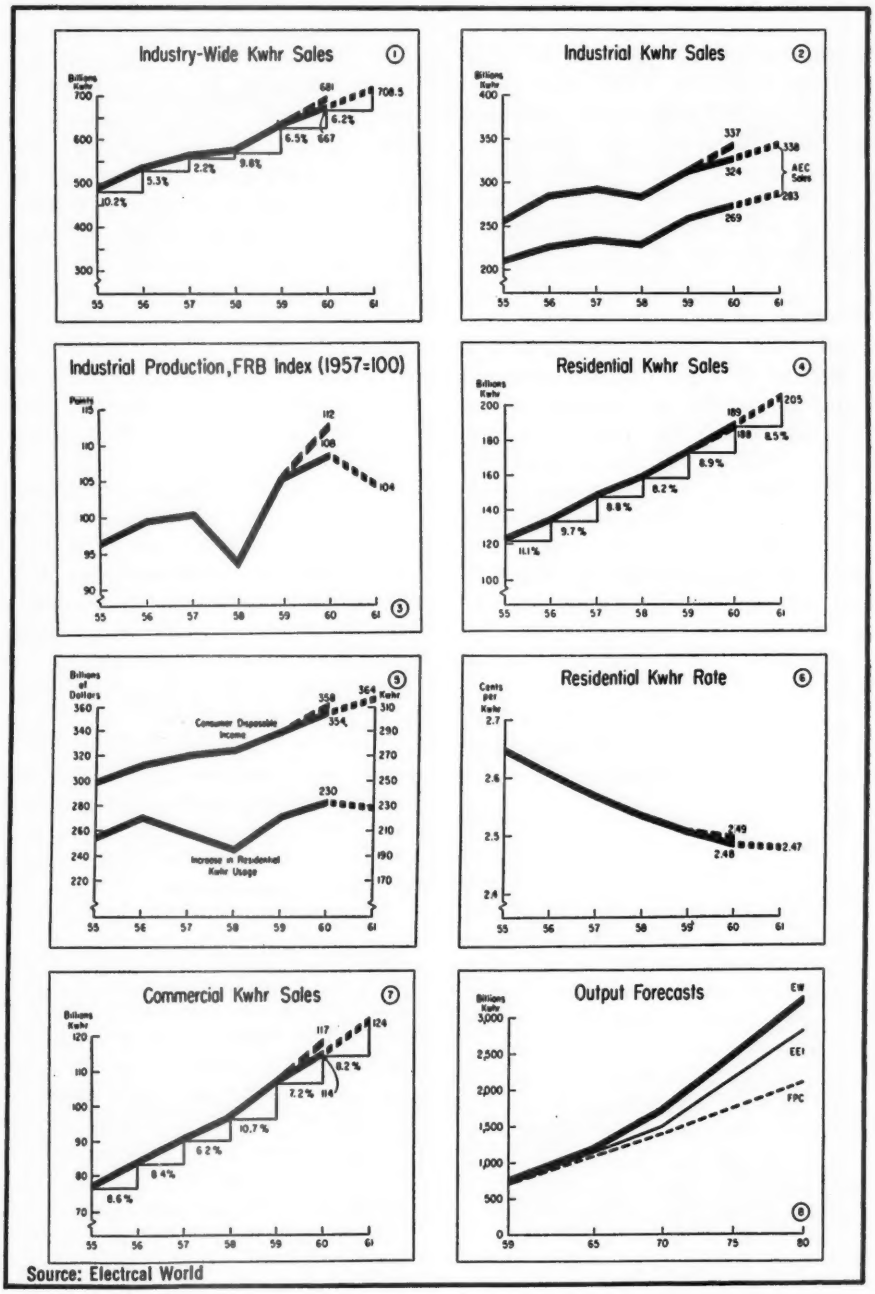
> Since last year, EEI has whittled back its estimates, bringing them below us, and making us the least conservative of the three. We tend to shrug at the FPC estimates; they've always been much, much too pessimistic, as the record shows. Actually, *Electrical World* traditionally has been on the high end of the three, and that same record shows that even we have been somewhat too conservative. All three of us were severely criticized by the American Public Power Association before a congressional committee last year for our conservatism, but *Electrical World* came closest to actuality. . . . We see a total utility output of 3.2 trillion kilowatt-hours in 1980, 12 per cent above EEI and 53 per cent above FPC.

REGARDING expenditures for construction, investor-owned utilities spent $3.8 billion in 1959 and $3.3 billion in 1960 (against a forecast of $3.5 billion). For 1961 about $3.5 billion has again been budgeted, but of course if the expected turnup in the economy does not come in the second half, the amount might again be curtailed.

Reserve generating capacity appears ample: It grew quite rapidly in 1958 and 1959, but this ended in 1960, and budgeted spending for new generating units is off about 2 per cent this year. In contrast to smaller expenditures for generation, a substantial increase in transmission spending is now under way, with this year's budget 28 per cent over last year and 20 per cent above the record year 1958. Some of this sudden jump in transmission expenditures is due to belated recognition that heavier, higher-voltage lines are needed in almost all parts of the country, Mr. Hochgesang explained; and part of it is due to building of new interconnections. The emphasis on transmission construction is expected to continue; on the other hand, only a rise of 4.2 per cent in distribution spending is expected for 1961.

CHART 10 shows "where the money comes from" to pay for construction. Cash flow from depreciation in 1960 was below expectations and new financing was also slightly lower. The amount of securities to be sold this year is expected to be higher than in 1960.

Revenues are expected to gain 6.2 per cent in 1961 *versus* 6.1 per cent in 1960 (7.1 per cent had been forecast). There are considerably fewer applications for higher rates pending this year than in 1960. The amount of increases granted declined in 1959-60 and another decline (to $40 million) is expected in 1961.



Source: Electrcal World

Rate increases received in 1958 approximated 0.9 per cent of revenues, but in 1961 may drop to 0.4 per cent. In 1959 the utilities requested $100 million but obtained only $55 million; in 1960 $92 million was asked and $48 million received. This year, with greater use of flow through, requests amount to $71 million, of which an estimated $40 million may be obtained.

REFERRING to an analysis of the revenue dollar: Taxes climbed to an all-time high of 24.2 per cent of revenues, and the percentage is expected to go slightly higher in 1961. Fuel costs continue their slow decline, due to more efficient equipment as well as cheaper fuel. Chart 14 gives some detail on this question: The amount of coal necessary to produce one kilowatt-hour continues to decline as more efficient units are installed and increased interconnections between utilities permit higher usage of the best equipment. Chart 15 shows that the operating ratio, after reaching a peak in 1957, is continuing in a downtrend. Mr. Hochgesang commented:

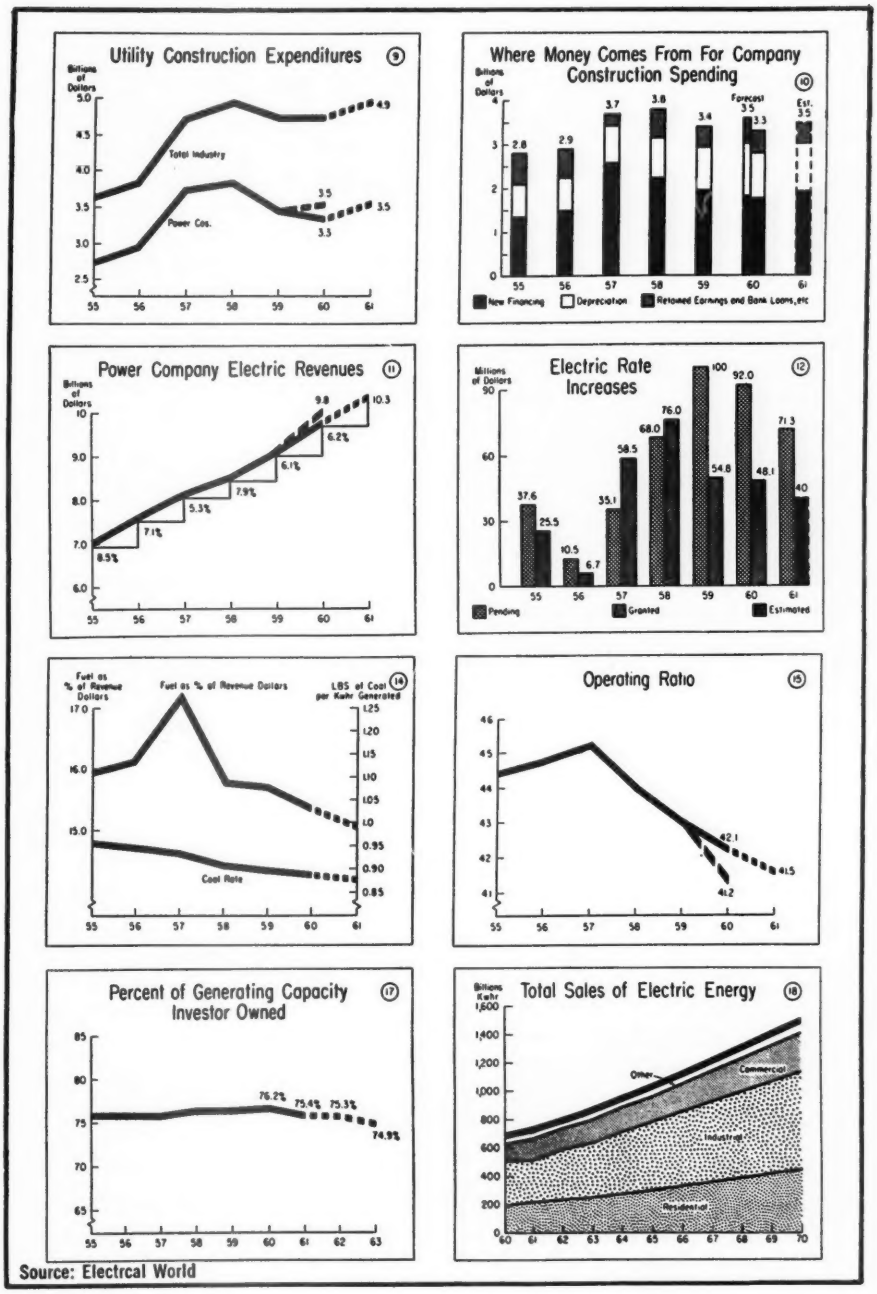
> I'd like to stress, though, that the operating ratio can be misleading. It reflects very little how expenses are affected by the quality of engineering planning and plant design, except of course as such quality levers fuel, salaries and wages, and maintenance. But poor planning and design could raise depreciation allowances, taxes, and capital charges, thereby lowering the operating ratio as defined. I am not implying in any way that this is happening; I am just putting my own qualification on this ratio which is so widely used.

Regarding projected gains in generating capacity during the three years 1961-63 for different areas, the fastest growth is anticipated in the East South Central and Mountain areas, followed by the South Atlantic region and the West South Central. The area with the lowest anticipated growth is New England. The average compounded rate of gain in capacity for the three years is 6 per cent.

Regarding the percentage of total generating capacity owned by the investor-owned utilities, this held up quite well during the Eisenhower administration, declining only from 78 per cent to 76.2 per cent of total capacity; however, a continuing decline is forecast by the *Electrical World* to a new low of 74.9 per cent in 1963.

Chart 18 indicates the components of total sales of electricity. The forecast assumes that electrical usage by industry will continue to increase faster than the industrial index, due to automation. New appliances for the home and commercial establishment are now beginning to reflect increasing research and development, and on the theory that it takes six years to move a new appliance "from concept to market" there should be a wave of new appliances starting about three years from now—as about three years ago expenditures for research and development began to increase sharply.

REGARDING reports that the gas industry is stepping up the development and sale of new appliances, which might succeed in retarding the growth of electric sales, Mr. Hochgesang admitted that in space heating gas is far ahead, while in ranges, dryers, and water heaters a sharp contest is under way, with electricity gaining in the percentage of total appliances (45 per cent last year *versus* 37 per cent in 1951). The proportion of electric dryers dropped from 72 per cent to 65 per cent in the same period, while



Source: Electrcal World

electric water heaters declined from 30 per cent to 21 per cent. On the other hand, in air conditioning and refrigeration electricity remains far ahead, although the gas industry is "making menacing noises from the wings."

Gas and electric sales have been running neck and neck in the postwar period —both have trebled. Gas residential customers increased 58 per cent and average residential use 53 per cent; but the number of electric customers gained 74 per cent and average residential use 190 per cent. (Residential cost of electricity dropped 26 per cent while gas cost was up 48 per cent.) However, sales of gas to industry (including interruptible) have obviously gained faster than electric sales to large users.

THE electric utility industry is planning to attack gas aggressively in its biggest field—house heating—according to the *Electrical World* editor. The all-electric home is now receiving a bigger promotional push than ever, both from the electric utilities and from the manufacturers. Mass home and apartment builders are discovering that even in some northern climates overall construction costs are equal or lower with electricity, and that they can obtain a big advantage by eliminating certain building trades. The rising cost of gas, as compared with the lowered promotional rates and budget billing now being offered by many electric utilities, is an added inducement.

It is true that most of the estimated 750,000 all-electric homes are still in warmer areas (especially where artificially low-cost electricity is obtainable from public power), but installations are now "really beginning to move" in colder areas served by investor-owned utilities. A trend toward electric heating is even discernible among combination utilities.

According to the *Electrical World* surveys, electrically heated homes are growing at a rate faster than 20 per cent per annum. About 160,000 homes a year are being installed or are converting to electric heat which is equivalent to about 16 per cent of the current housing starts. These homes will account for some 3 billion kilowatt-hours per annum or about one-fifth of the total 1960 gain in residential load.

Mr. Hochgesang urged the investor-owned utilities to increase their pooling interconnections and build their own version of "giant power," so that the government grids now being proposed at Washington won't be necessary. He pointed out that "a federal transmission grid appears to be emerging as one of the rallying calls of the new administration. There will be more open-mindedness to requests for new federal hydro starts. And the new group certainly will support bills for easing the economic justification calculations for federal power attached to multipurpose projects. . . . Yet Congress could act as more of a brake on federal power matters than it has during the past four or six years. After all, the Republicans are in a better position in the House and the Senate than they were before, and the fight over packing of the House Rules Committee may have solidified the alliance between southern Democrats—who have little interest in western hydro—and conservative Republicans."

Middle South Utilities Wins SEC Permission for Stock Options

MIDDLE SOUTH UTILITIES recently won permission from the SEC to adopt a plan for granting restricted stock

options to selected system employees. Assuming stockholder approval, the company will set aside 120,000 common shares for the exercise of options to be granted under the plan. Options will be limited to seven years and to 10,000 shares per employee; no new options can be granted after five years from the effective date of the plan. The option price will be not less than 100 per cent of fair market price on the date when the option is granted, or on the date of any reduction in the exercise price. (The company had requested 95 per cent of market price.)

ONLY one-quarter of the shares covered by the plan can be optioned to system officials, and the total exercise price for all shares optioned to any one person may not exceed one and a half times his annual cash compensation. The decision stated:

> Restricted stock options are accorded favorable income tax treatment. The use of such options has been widely adopted as a form of executive compensation and are "commonplace" today. At the hearing on its plan, Middle South presented the testimony of persons experienced in executive placement, including officers of management consulting and executive recruiting firms, of executives of industrial corporations and other utilities, and of one of its own directors who represents the largest single block of Middle South stock. It was the unanimous view of these witnesses that the granting of stock options was necessary in order to enable the corporation to compete in the market for topflight management personnel.

THE commission noted that the Interstate Commerce Commission and the regulatory bodies in some sixteen states have approved stock option plans for utility companies as compatible with the public interest.

FINANCIAL DATA ON ELECTRIC UTILITY STOCKS

Approx. Rev. (Mill.)			*2/21/61 Price About*	*Dividend Rate*	*Approx. Yield*	*Recent Share Earns.*	*% Incr. In Sh. Earn. Recent*	*% Incr. 5-yr. Aver.*	*Price-Earn. Ratio*	*Div. Payout*	*Approx. Book Value*
$152	S	Allegheny Power System .	46	$1.70	3.7%	$2.38N	2%	5%	19.3	71%	$18
324	S	American Elec. Power	65	1.88c	2.9	2.53De	5	8	25.7	74	24
63	O	Arizona Pub. Serv.	56	1.20	2.1	*2.01Se	*11	*6	*27.9	60	18
13	O	Arkansas Mo. Power	23	1.00	4.3	1.44Se	7	3	15.9	69	10
40	S	Atlantic City Elec.	42	1.20	2.9	*1.57De	*13	*9	*26.8	77	12
175	S	Baltimore G. & E.	30	1.00	3.3	1.48De	5	8	20.3	67	13
9	O	Bangor Hydro-Elec.	46	2.20	4.8	3.34Ja	6	9	13.8	66	30
7	O	Black Hills P. & L.	37	1.60	4.3	2.56Oc	1	3	14.5	63	21
124	S	Boston Edison	71	3.00	4.2	4.10De	11	4	17.3	73	51
31	A	Calif. Elec. Power	21	.84	4.0	*1.04De	*D10	*10	*20.2	81	12
24	O	Calif. Oreg. Power	49	1.60	3.3	*1.94N	*3	*	*25.2	82	26
10	O	Calif. Pac. Util.	25	.90	3.6	1.31De	D2	4	19.1	69	12
76	S	Carolina P. & L.	50	1.48	3.0	2.24Ja	2	6	22.3	66	21
37	S	Central Hudson G. & E. ..	30	1.00	3.3	*1.47De	*4	*8	*20.4	68	14
27	O	Central Illinois E. & G. ...	46	1.44	3.1	2.36De	8	7	19.5	61	16
43	S	Cent. Ill. Light	41	1.52	3.7	2.10Ja	D14	10	19.5	72	18
60	S	Cent. Illinois P. S.	64	2.12	3.3	3.03Ja	11	7	21.1	70	20
22	O	Central Louisiana Elec. ...	31	1.00	3.2	1.28De	14	7	24.2	78	11
44	O	Cent. Maine Power	31	1.40	4.5	*2.01Ja	*17	*	*15.4	70	21
160	S	Cent. & South West	42	1.02	2.4	1.44Se	4	6	29.2	71	11
12	O	Cent. Vermont P. S.	22	1.08	4.9	*1.43De	*3	*2	*15.4	76	13
153	S	Cincinnati G. & E.	40	1.50	3.8	2.23De	14	3	17.9	67	16
8	O	Citizens Util. "B"	22	.56	2.5	.78Se	14	6j	28.2	72	4

Approx. Rev. (Mill.)		(Continued)	2/21/61 Price About	Dividend Rate	Approx. Yield	Recent Share Earns.	% Incr. In Sh. Earn. Recent	% Incr. In Sh. Earn. 5-yr. Aver.	Price-Earn. Ratio	Div. Payout	Approx. Book Value
130	S	Cleve. Elec. Illum.	55	1.80	3.3	2.97De	1	9	18.5	61	26
8	O	Colo. Cent. Power	35	.75	2.1	1.30De	21	10	27.0	58	12
52	S	Columbus & S. O. E.	57	1.80	3.2	2.98De	24	6	19.1	60	24
454	S	Commonwealth Edison	73	2.00h	5.1h	3.84N	5	10	19.0	52	33
17	A	Community P. S.	35	1.00	2.9	1.53De	3	5	22.9	65	13
89	O	Conn. Lt. & Power	28	1.20	4.3	*1.47Ja	*5	*6	*19.1	82	15
615	S	Consol. Edison	69	3.00	4.3	*3.88De	*D1	*6	*17.8	77	49
258	S	Consumers Power	65	2.60	4.0	3.45De	D7	5	18.8	75	35
90	S	Dayton P. & L.	64	2.40	3.8	3.25Se	1	4	19.7	74	30
53	S	Delaware P. & L.	44	1.20	2.7	1.66Se	4	9	26.5	72	26
267	S	Detroit Edison	51	2.20	4.3	2.68Ja	13	3	19.0	82	27
156	A	Duke Power	54	1.60	3.0	2.20De	2	10	24.5	73	20
105	S	Duquesne Light	28	1.18	4.2	*1.52De	*5	*5	*18.4	78	10
38	O	East. Util. Assoc.	43	2.20	5.1	2.55De	D17	4	16.9	86	26
3	O	Edison Sault Elec.	17	.90	5.3	1.11Se	D20	6	15.3	81	9
19	O	El Paso Electric	52	1.16	2.2	1.76De	12	8	29.6	66	12
13	S	Empire Dist. Elec.	38	1.52	4.0	2.00De	10	7	19.0	76	16
62	S	Florida Power Corp.	39	.88	2.3	1.28Se	20	10	30.5	69	12
155	S	Florida P. & L.	66	1.00	1.5	2.11De	10	17	31.3	47	15
4	O	Florida Pub. Util.	24	.72	3.0	1.28Se	5	9	18.8	56	10
231	S	General Pub. Util.	30	1.16	3.9	*1.53Se	*2	*7	*19.6	76	15
7	O	Green Mt. Power	25	1.10	4.4	1.45De	12	3	17.2	76	12
86	S	Gulf States Util.	40	1.00	2.5	1.38De	D7	5	29.0	72	13
54	A	Hartford Electric	67	3.00	4.5	*3.67De	*1	NC	*18.3	82	43
27	O	Hawaiian Electric	71	2.50	3.5	3.33De	2	7	21.3	75	34
105	S	Houston L. & P.	99	1.60	1.6	3.27Ja	7	6	30.3	49	21
37	S	Idaho Power	54	1.80	3.3	2.58De	11	6	20.9	70	29
104	S	Illinois Power	67	2.20	3.3	2.92De	8	14	22.9	75	20
54	S	Indianapolis P. & L.	54	1.90	3.5	2.64Se	10	9	20.4	72	18
33	S	Interstate Power	23	.95	4.1	1.17Se	—	4	19.9	81	8
44	S	Iowa Elec. L. & P.	48	1.80	3.7	2.61De	9	5	18.4	69	21
51	S	Iowa-Illinois G. & E.	47	1.90	4.0	2.55De	D3	4	18.4	75	20
51	S	Iowa P. & L.	42	1.60	3.8	2.20De	7	4	19.1	73	20
40	O	Iowa Public Service	21	.88	4.2	1.24De	1	4	17.0	71	10
17	O	Iowa Southern Util.	36	1.48	4.1	2.06De	D6	9	17.5	72	20
64	S	Kansas City P. & L.	68	2.32	3.4	3.31De	7	6	20.5	70	29
36	S	Kansas G. & E.	58	1.68	2.9	2.76De	—	7	21.0	61	22
57	S	Kansas P. & L.	44	1.48	3.4	2.39De	—	7	18.4	62	19
47	O	Kentucky Util.	43	1.60	3.7	2.65Se	D4	6	16.2	60	23
8	O	Lake Superior D. P.	27	1.28	4.7	1.77N	NC	4	15.3	72	17
136	S	Long Island Ltg.	48	1.40	2.9	*2.18De	*7	*9	*22.0	64	20
71	S	Louisville G. & E.	57	1.52	2.6	2.69De	9	8	21.2	56	22
12	O	Madison G. & E.	32	1.00	3.1	2.07Se	3	3	15.5	48	39
5	A	Maine Pub. Service	24	1.24	5.2	1.47De	—	4	16.3	84	14
8	O	Michigan G. & E.	85	2.00e	5.6e	5.75Se	4	12	14.8	35	29
215	S	Middle South Util.	34	1.00	3.0	1.50De	7	9	22.7	66	14
31	S	Minn. P. & L.	40	1.60	4.0	2.47Ja	11	5	16.2	65	21
16	S	Missouri P. S.	24	.72f	5.0	1.12De	9	5	21.4	64	8
9	O	Missouri Util.	32	1.44	4.5	2.00De	19	2	16.0	72	18
46	S	Montana Power	33	1.12	3.4	*1.49Se	*6	*8	*22.1	75	9
172	S	New England Elec.	24	1.08	4.5	1.35De	1	3	17.8	80	15
52	O	New England G. & E.	29	1.24	4.3	1.84De	7	5	15.8	67	17
110	S	N. Y. State E. & G.	34	1.20	3.5	*1.88De	*4	*8	*18.1	64	19
285	S	Niagara Mohawk Power	44	1.80	4.1	*2.24De	*8	—	*19.6	80	23
104	O	Northern Indiana P. S.	69	2.32	3.4	3.43De	10	5	20.1	70	26
170	S	Northern Sts. Power	31	1.18	3.8	1.49De	1	6	20.8	79	12
12	O	Northwestern P. S.	26	1.10	4.2	1.77Se	17	6	14.7	62	12
151	S	Ohio Edison	38	1.48	3.9	2.13Ja	6	6	17.8	69	17
58	S	Oklahoma G. & E.	38	1.20	3.2	1.48Ja	2	6	25.7	81	11
29	S	Orange & Rockland Util.	43	1.10	2.6	*1.67De	*7	*14	*25.7	66	14
20	O	Otter Tail Power	39	1.80	4.6	2.30De	D17	2	17.0	78	25
535	S	Pacific G. & E.	80	2.60	3.3	4.14De	12	5	19.3	63	42
58	O	Pacific P. & L.	45	1.80	4.0	*2.32N	*22	*4	*19.4	78	23
138	S	Penn P. & L.	30	1.25	4.2	1.73De	—	5	17.3	72	13
264	S	Philadelphia Elec.	58	2.40	4.1	2.84De	D2	5	20.4	81	26

Approx. Rev. (Mill.)		(Continued)	2/21/61 Price About	Dividend Rate	Approx. Yield	Recent Share Earns.	% Incr In Sh. Earn. Recent	% Incr In Sh. Earn. 5-yr. Aver.	Price Earn. Ratio	Div. Payout	Approx. Book Value
40	O	Portland G. E.	38	1.32	3.5	2.14Ja	19	4	17.8	62	18
82	S	Potomac Elec. Power	38	1.44	3.8	*1.96Se	*20	*9	*19.4	73	18
102	S	Pub. Serv. of Colo.	70	2.10n	3.0	2.95Se	15	6	23.7	71	27
369	S	Pub. Serv. E. & G.	50	2.00	4.0	2.70De	19	4	18.5	74	24
92	S	Pub. Serv. of Ind.	52	2.20	4.2	2.56De	D6	2	20.3	86	28
34	O	Pub. Serv. of N. H.	22	1.04	4.7	1.39Ja	2	2	15.8	75	14
17	O	Pub. Serv. of N. M.	43	1.00	2.3	1.62Se	7	10	26.5	62	12
32	S	Puget Sound P. & L.	37	1.56	4.2	2.12De	—	9	17.5	74	23
72	S	Rochester G. & E.	50	1.80b	6.6b	*3.01De	*D7	*7	*16.6	60	30
11	S	St. Joseph L. & P.	36	1.60	4.4	2.24De	5	8	16.1	71	19
71	S	San Diego G. & E.	37	1.20	3.2	1.91De	4	8	19.4	63	18
12	O	Savannah E. & P.	33	1.12	3.4	1.33De	6	4	24.8	84	13
14	O	Sierra Pacific Pr.	58	1.60	2.7	2.52De	6	13	23.0	64	17
280	S	So. Calif. Edison	73	2.60k	3.6	*4.31Se	*16	*6	*16.9	60	42
56	S	So. Carolina E. & G.	51	1.50	2.9	2.02De	13	6	25.2	74	19
8	O	Southern Colo. Pr.	25	.90	3.6	1.17N	D1	—	21.4	77	13
297	S	Southern Co.	50	1.50	3.0	2.06De	7	8	24.3	73	17
21	S	So. Indiana G. & E.	42	1.70	4.0	2.62De	4	2	16.0	65	21
9	O	So. Nevada Power	32	.84m	2.6	1.45De	19	5	22.1	58	15
4	O	Southwestern E. S.	19	.76	4.0	1.02Ja	2	5	18.6	75	8
53	S	Southwestern P. S.	29	.88	3.0	1.13De	8	6	25.7	78	7
41	A	Tampa Electric	40	.72	1.8	1.22De	25	12	32.8	59	11
183	S	Texas Util.	94	2.08	2.2	3.12De	7	9	30.1	67	21
47	S	Toledo Edison	21	.70	3.3	1.08Se	D7	2	19.4	65	9
20	O	Tucson G. E. L. & P.	34	.80	2.3	1.19De	3	8	28.6	67	9
147	S	Union Electric	44	1.80	4.1	*2.17De	*19	*5	*20.3	83	17
39	O	United Illum.	31	1.38	4.5	*1.74Oc	*5	*1	*17.8	79	16
6	O	Upper Peninsula Pr.	34	1.60	4.7	2.16N	25	—	15.7	74	19
53	S	Utah Power & Light	38	1.32	3.5	1.86De	—	4	20.4	71	20
161	S	Virginia E. & P.	52	1.30	2.5	1.86De	10	8	28.0	70	16
36	S	Wash. Water Pr.	48	2.00	4.2	*2.41De	*D10	*7	*20.0	83	29
82	O	West Penn Power	69	3.00	4.3	3.61Se	4	3	19.1	83	26
13	O	Western Lt. & Tel.	51	2.40	4.7	3.52De	10	6	14.5	68	27
34	O	Western Mass. Cos.	26	1.20	4.6	1.61De	D3	1	16.1	75	19
134	S	Wisc. El. Pr. (Cons.)	46	1.80	3.9	2.71De	D6	7	17.0	67	27
48	O	Wisconsin P. & L.	39	1.48	3.8	2.38De	2	7	16.4	62	21
46	S	Wisconsin P. S.	33	1.30	4.0	2.05N	9	5	16.1	63	17
		Averages			3.7%		6%	6%	20.4	70%	
		Foreign Companies									
217	S	American & Foreign Pr.	10	$ .50	5.0%	$1.30De'59	D33%	0%	7.7	38%	$32
151	A	Brazilian Traction	4	.25	6.3	.58De'59	D10	—	6.9	43	28
97	A	British Col. Pr.	39	1.60	4.1	2.48De'59	27	9	15.7	65	36
20	O	Calgary Power	28	.40	1.4	1.06Se	9	18	26.4	38	6
18	A	Gatineau Power	39	1.50	3.8	2.25De'59	13	—	17.3	67	21
16	A	Quebec Power	35	1.60	4.6	2.53De'59	5	9	13.8	63	26
77	A	Shawinigan Water & Pr.	28	.68	2.4	1.55De'59	7	8	18.1	44	19

*Deferred taxes resulting from liberalized depreciation are not normalized. If they had been normalized the price-earnings ratio would be higher, and the rate of increase in share earnings would be smaller. D—Decrease. NC—Not comparable. A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. Ja—January; F—February; Ma—March; Ap—April; My—May; Je—June; Jy—July; Au—August; Se—September; Oc—October; N—November; De—December. b—Also 3 per cent stock dividend (paid January 25, 1961) included in the yield; similar dividends are paid annually, representing balance of earnings. c—Also 2½ per cent stock dividend January 10, 1961. e—Also regular annual 3.3 per cent stock dividend (3 per cent paid in previous years), included in the yield. f—Also regular stock dividend of one-half per cent quarterly, included in yield (paid since 1956). h—Also 2.4 per cent stock dividend December 1, 1960, included in yield; stock dividends are paid annually, reflecting balance of earnings. j—The rate of increase would be 12 per cent if the present number of shares had been used to compute share earnings of past years, instead of using the number of shares actually outstanding at the end of each year. k—Also 4 per cent stock dividend February 24, 1961. n—Also 5 per cent stock dividend February 17, 1961. m—Fifty per cent stock dividend payable January 18, 1961—cash dividend on new stock 84 cents.

What Others Think

Landmark Decisions in Utility Regulation

WHAT are today the accepted landmark decisions in public utility regulation? This is a tricky question unless it is answered from the perspective of long-range analysis. Probably in no major branch of the law in such a relatively brief period has the ruling case law shifted and switched so greatly. The great dissents of the Holmes-Brandeis period in the late twenties have become the majority rule and more recently have, in turn, been eclipsed by the emphasis on commission expertise. Was Smyth *v.* Ames ever actually overruled? If not, how much remains and where is it a valid precedent today?

These and other puzzling questions in this special field of law were recently given the benefit of a balanced analysis by a veteran practitioner as well as a scholar in this field, A. J. G. Priest, now professor of law at the University of Virginia and a partner in the firm of Reed & Priest. Writing the lead article in the November, 1960, issue of the *Virginia Law Review,* Professor Priest goes back to the classic starting point of Munn *v.* Illinois (1877), in which the U. S. Supreme Court upheld the constitutionality of an Illinois statute regulating grain warehouses. Is Munn *v.* Illinois good law today? Professor Priest thinks it is:

> This opinion has been quoted by the court so often and so approvingly in the past eighty years that it has become doctrinal. Legislatures were not unseemly in their haste to enter the regulatory door opened to them, but experimentation began and, by the end of the century, statutory detemination of railroad freight and passenger rates, street railway fares, and charges for the distribution of manufactured gas and water, as well as telephone tolls and the rates of the emerging electric utility industry, had become the American norm.

BUT statutory legislation, however valid, was clumsy and impractical and gave way to the guiding principles laid down in Smyth *v.* Ames (1898). Professor Priest views this case as one of those transitional guides which appeared at the time when the relatively new field of utility regulation was in need of standards. It was a middle-of-the-road type of decision in which the court tried to place emphasis on reasonableness without being too doctrinaire about any formula to obtain it. As a result, it left some vague spots to be filled in by regulatory discretion, and, on the other hand, suggested some guideposts which did not

prove too helpful. Professor Priest's tolerant view is that, on the whole, it was a useful and helpful decision, well worth having on the books for the thirty-odd years of its ascendancy:

> Smyth *v.* Ames appeared as the country was emerging from a severe depression which had sharply lowered all price levels. And it was to be expected that the representatives of Nebraska, who were defending the freight and passenger rates fixed by that state's legislature, should become passionate advocates of reproduction cost new. On the other hand, the railroads, whose properties had been built when prices were on a much higher plateau, clamored for original cost or the use of capitalization or any criterion *other* than the then cost of recreating their facilities.
>
> Confronted with these sharply divergent views, the Supreme Court took an intermediate position. Its conclusion was that the basis of the reasonableness of rates charged must be the fair value of the property used. In order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses, should be considered and given such weight as may be "just and right in each case." The company was entitled to ask a "fair return upon the value of that which it employs for the public convenience"; but the public could demand that no more be exacted from it than the services rendered were reasonably worth.
>
> This landmark holding may well have maintained lawyers, engineers, and economists in a style to which they might not otherwise have become accustomed. It also turned rate making into an exceedingly tedious business. But it represented a compromise between fair value and original cost at a time when price levels were abnormally low. And it could be justified in this hour of menacing inflation. In all events, Smyth *v.* Ames dominated rate regulation for more than forty years, as recurrent declarations of the Supreme Court abundantly demonstrated.

It was in 1933, during the last great depression, that the highest court, beginning with the Los Angeles Gas & Electric case, began to back away from Smyth *v.* Ames. The departure became a formal separation in the Natural Gas Pipeline case in 1942, and a sort of absolute divorce in the much divided opinion of the court in the Hope Natural Gas Company case of 1944. Although Smyth *v.* Ames was never formally overruled, its requirements were certainly abandoned in the emphasis placed by the federal court on end results rather than methods used, under the Hope decision. The expert commissions were installed as ostensible masters of the house of regulation, but still subject to appellate review under special circumstances suggesting clear confiscation. Mr. Priest says on this point:

> Hope Natural Gas obviously did not close the Supreme Court's doors to a utility which has been dealt with arbitrarily and capriciously in a rate proceeding. If, for example, the revenues which a company has been given an opportunity to earn will demonstrably not be enough to maintain its credit

and to attract capital, the regulatory agency's order should be struck down as confiscatory, but the going will be ruggedly uphill. Furthermore, certiorari certainly will not be granted except in strikingly unusual circumstances.

And if the proof of the pudding were needed, it might be added that none have been struck down since that decision over sixteen years ago.

THE Virginia law professor also mentions, with great respect, the celebrated concurring opinion by Judge Brandeis in the Southwestern Bell Telephone case of 1923, especially the following passage:

> The investor agrees, by embarking capital in a utility, that its charges to the public shall be reasonable. His company is the substitute for the state in the performance of the public service; thus becoming a public servant. The compensation which the Constitution guarantees and *opportunity* to earn is the reasonable cost of conducting the business. Cost includes not only operating expenses, but also capital charges. Capital charges cover the allowance, by way of interest, for the use of the capital, whatever the nature of the security issued therefor; the allowance for risk incurred; and enough more to attract capital. *The reasonable rate to be prescribed by a commission may allow an efficiently managed utility much more.* (Emphasis supplied.)

THE fact that this special Southwestern Bell opinion endeavored to reassure more definiteness and stability in the rate base by plumping for the prudent investment theory proved rather prophetic in the light of the subsequent adoption of accounting practices which today make such cost standards virtually a matter of routine. But Justice Brandeis proved a poor price prophet when he suggested in his 1923 opinion that the engineering witnesses were wrong in predicting price increases.

Brandeis said then:

> . . . Engineers testifying in recent rate cases have assumed that there will be a new plateau of prices. . . . The course of prices for the last 112 years indicates, on the contrary, that there may be a practically continuous decline for nearly a generation; that the present price level may fall to that of 1914 within a decade; and that, later, it may fall much lower.

We all have 20-20 hindsight, of course; but it would seem that the rate case engineers of the early twenties, rather than Justice Brandeis, had the better of it in the economic forecast department. As Professor Priest pointed out:

> But the present price level has *trebled* the price "plateau" which prevailed in 1914. And any expectation that it will fall substantially seems illusory. It is difficult to imagine either that labor will surrender many of its hard-won gains or that corporate managements will inaugurate a series of sweeping price reductions. The cold war remains frigid. This is the era of managed money. Our national debt now approaches $300 billion. Can it safely be predicted that inflation will not persist, at least in the absence of a prolonged period of economic distress?

OBSESSED, if that is a respectful word, with his concern that the rate base should be definite, stable, and readily ascertainable, Brandeis insisted on the cost base as the true measure of the allowable

return in utility rate cases. Federal and state regulators seized on this as a convenient short cut, more justifiable (in the opinion of some) by considerations of expediency than of equity. Since then, regardless of all the protestations about not being enslaved by any formula, most of the commissions have settled upon an almost ritualistic routine: (1) find a strictly cost base; (2) fix a fairly stereotyped rate of return; (3) multiply these; (4) add the ingredients of proven operating expenses. The resulting sum total of revenue requirement is thus equated with the overall performance of the rate structure. This is supposed to produce a reasonable rate, assuring capital of its fair wage or at least an opportunity of earning the same.

But the whole thing is done with *cost* dollars, protected from any direct impact from present or changing property values, or replacement cost, the pressure of inflation, etc.

PROFESSOR Priest thinks that the "Brandeis technique" can still be useful if more recent techniques for economic adjustment can be added. He states on this:

> The Brandeis technique for determining a public utility's rate base can remain simple even under conditions of inflation if an appropriate factor is developed for expressing high-value dollars in terms of dollars which have lost much of their purchasing power. Tailor-made price indices accurately and honestly predicated on a utility's experience have provided such a solution in a number of instances. The use of general price indices in such circumstances has been condemned, but specific indices which are genuinely applicable to the property examined plainly are less subject to criticism.

Few regulatory agencies have paid even casual attention to the suggestion of Justice Brandeis that the "reasonable rate to be prescribed by a commission may allow an efficiently managed utility much more" than the actual cost of rendering its service. When the economy is booming, a regulated utility might well be permitted at least to strengthen its reserves, just as it patently will be required to tighten its belt in times of fiscal distress.

Upon their first reading of the majority opinion delivered by Justice Douglas in Hope Natural Gas, many public utility lawyers felt that they had been left in an impenetrable jungle. Every semblance of trail blazing seemed gone and no machetes were provided to hack a way through the undergrowth. But that alarm, however deeply felt, now appears to have been exaggerated.

Between January 3, 1944, when the Hope Natural Gas decision was handed down, and January 3, 1959, the utilities have expanded astonishingly. For example, the plant of the electric utility industry grew from $14.8 billion in 1944 to 44.3 billions at the end of 1958, while the utility plant of the gas industry climbed from 4.9 billions to 18.1 billions in the same period. Significantly, the Handy-Whitman price index covering electric utility property went from 246 in 1944 to 587 at the end of 1958; and the Handy-Whitman figure for steel mains used in the gas industry rose from 242 to 629 in those fifteen years. Our inflation has not been moving at precisely a snail's pace.

AFTER all, the Supreme Court majority opinion in the Hope case cited Brandeis' opinion as an authority for the importance of providing a utility com-

"YOU HEARD ME. THE GROUND CREW STAYS ON THE GROUND."

pany with "enough revenue not only for operating expenses but also for the capital costs of the business," including "service on debt and dividends on stock." The return on equity was to be measured by the returns on "investments in other enterprises having corresponding risks" and assure confidence in the financial integrity of the enterprise "so as to maintain its credit and to attract capital."

This regard for debt interest and stock dividends was all the railroad investors were seeking in Smyth *v.* Ames, in the view of Professor Priest. There was, of course, judicial notice of the obvious fact that utility securities in 1944 had been generally dehydrated as compared with the bloated railroad issues of 1898—following almost a half-century of regulatory effort.

The Hope cost base formula was criticized from the bench (Justice Jackson) and elsewhere, for its vagueness and for its doubtful applicability to a commodity-plus-service enterprise such as natural gas operations. But despite such dissents,

neither the courts nor Congress have changed the Hope pattern.

YET, by the same process of assuring state as well as federal commissions of their regulatory freedom, a number of the states have persisted in following the older value base precedents, even though it meant continued adherence to the principles of Smyth *v.* Ames. Nor was the elevation of regulatory expertise to a dominant position without restriction. As the "Two Rivers" case in Wisconsin revealed, regulatory commissions were still required to rationalize their rate base conclusions; they could not simply pronounce them "ex cathedra" and expect them to stand on appeal simply because they had said so. Even the federal commissions were required by the federal courts to show the basis for their findings and conclusions in rate cases.

But what about that other important Brandeis concept in the Southwestern Bell case, to the effect that "the thing devoted by the investor to the public use is not specific property, tangible and intangible, but *capital* embarked in the enterprise"? Justice Douglas swallowed this down whole, in his Hope case opinion, when he said "by such a (return on investment) procedure the utility is made whole and the integrity of its investment maintained. No more is required."

CLEARLY, this places the utility investor in a special or second-class position as compared with other kinds of property owners. As Priest points out, the owner of a residence built for $15,000 in 1940, which had acquired a marketable value of $35,000 by 1960, would be justified in believing that he still owned a *house,* not merely the $15,000 originally invested in it. Not so, apparently, in the case of the investors in property dedicated to public utility service. Yet there must be economic limitations to such a cavalier reclassification of the utility owner's property rights. Professor Priest says of this:

> If, when prices have reached what seems to be a permanently high plateau, no provision is made for the *replacement* of property constructed at much lower figures, the burdens imposed on future generations of ratepayers and investors may become overwhelming. Percentages of low-cost property in a growing company's plant account will become lower with each passing year. Improvements in the art may take up other slack, but the problem will grow more acute as inflation crawls upward. If only we had been able to cling to the prices which obtained when Southwestern Bell Telephone Company (1922), Lindheimer *v.* Illinois Bell Telephone Company (1934), and even Hope (1943) were argued before the Supreme Court. Neither Justice Brandeis' concurring opinion nor the opinions of the majority in Lindheimer and Hope could have been written as they were if this country had then been confronted with spiraling inflation.

INSTANCES of catastrophic collapse in foreign currencies, such as in China, where telephone rates could not be increased fast enough to keep up with the inflationary climb, or in prewar Germany where a house was sold for as little as one American dollar, have been cited. Consideration of such extremes suggests that inflation may demand recognition in the utility rate-making process if the inflationary spiral is stepped up enough. Professor Priest concludes on this:

> The speed with which corrective

measures must be applied obviously will depend upon the success of efforts made to check inflation. If the purchasing power of the dollar remains at its present level, the exponents of original cost accounting may be able to hold their ground, but if the dollar continues to shrink toward the proportions of a dime, adjustments will be inevitable. Industries subject to price control cannot be segregated from the remainder of the nation's economy indefinitely.

The fair value principle will live, as will the concept that depreciation reserves are intended to replace property rather than merely to amortize investment, and either Congress or the Supreme Court will recognize them, almost perforce, if the inflation spiral continues to twist upward. That process of recognition will accelerate as it is discovered that an industry whose prices are determined on the basis of original cost accounting cannot attract the equity capital required for extensions and additions. And prolonged delay will have a seriously adverse effect on the public interest.

In other words, the hallowed Brandeis opinion must still be examined and re-examined in the light of what Professor Priest calls "stubborn fiscal circumstance, particularly the grim fact of inflation." The nation's economy may not as yet be seriously damaged, but such factors must still be viewed objectively and realistically.

—F. X. W.

REA Policy Memorandum

On February 3rd, Secretary of Agriculture Freeman directed a memorandum to all employees of the Rural Electrification Administration. This memorandum gives an interesting insight into the general tenor of policies that can be expected during the next four years.

In an introductory statement, Secretary Freeman noted that the orderly transition between Administrators is an essential element in the operation of our form of government. He also reiterated President Kennedy's pledge to "restore REA to its former rôle of pre-eminence." He then outlined the following general principles to the REA employees:

1. We shall be guided strictly by the Rural Electrification Act, as amended. We expect loans which meet the legal, feasibility, and other requirements of the act to be approved. Each individual loan application will be considered on its merits.

2. We expect to have an Administrator in whose judgment we shall have sufficient confidence that he may be delegated authority to evaluate and approve individual loans in accordance with the Rural Electrification Act and with the general policies, rules, and regulations established by the Secretary and the Director of Agricultural Credit Services.

3. Rural Electrification Administration has a responsibility to assist and promote rural telephone co-operatives where necessary to extend telephone service to farmers and other rural people. We expect the rural telephone program to accomplish area coverage telephony to a maximum degree, with emphasis given to the potential which rural telephone co-operatives have to

offer. We shall give increased attention to broad economic development of rural areas, recognizing the key rôle of co-operatives to extend telephone, electric, and other service to the widest practical number of rural users.

4. There is a recognized need for generation and transmission loans. We expect REA to make such loans when they are feasible and needed to help solve power shortages or reduce costs to rural consumers.

5. We shall oppose any change in the 2 per cent interest rate on REA loans.

6. We shall favor strict enforcement of the public preference clause in power marketing for power generated at federally financed plants.

7. We recognize that the development of natural resources and the generation and transmission of electric power in federally owned facilities has had a direct and important impact on the rural electrification program, on the well-being of REA policies, as well as on sound economic development of rural areas.

8. We recognize that loan funds for rural electrification and rural telephony must be available in amounts adequate to assure that these programs will proceed on an orderly basis. Accordingly, we are currently reviewing the REA budget submissions.

9. We know that the rural electric systems carry on many technical management training programs. REA will co-operate with these programs in every possible way within the limits of the REA Act and the available budget for this purpose.

THESE are the guide lines the REA will be following in the next few years. It seems certain from these statements that the co-operatives will figure heavily in loans granted by REA, both for rural electrification and for telephony.

Secretary Udall Enunciates Power Policy

SECRETARY of the Interior Stewart L. Udall has enunciated a broad, new power policy for the Interior Department, calling for a vigorous program of full development and maximum utilization of our total energy resources to meet the nation's growing demands.

In his statement, Secretary Udall noted that he would be guided in development of this policy by President Kennedy and principles set forth in appropriate acts of Congress.

He described electric power aspects of the Interior Department's programs as one of its most vital activities and stated:

> The furnishing of an adequate supply of low-cost power for the homes, farms, and industry sufficient to service a dynamic economy is a matter of basic importance to the economic growth and defense of the nation and is, therefore, a matter of governmental concern.
>
> Utility systems of all kinds—federal, state, municipal, private, co-operative —must carry out their responsibilities to the public welfare.

The Secretary reaffirmed his belief in basic power policy principles outlined by the department in 1946, which, by act of Congress, call in part for installation of electrical generation facilities in federal dams where feasible, preference in power sales to public bodies and co-operatives, low-cost power rates, and power disposal to prevent monopolization.

He said these fundamental principles form the foundation upon which we will build a sound power program for the future. The Secretary ordered power-marketing agencies to execute their duties in such a manner so as to produce maximum benefits for all people. He said this would require increased co-ordination and planning with preference customers and other utilities.

Secretary Udall noted that he had directed Kenneth Holum, Assistant Secretary for water and power, to take measures necessary to carry out this program.

This statement, together with that of the Secretary of Agriculture (page 406), gives a fair basis for judging what administration policies may be in relation to the utility industry.

One mitigating factor, in an otherwise rather unfavorable picture, will be the big question of appropriations. Congress can be expected to give careful scrutiny to any recommendations for large government spending programs and the coalition of conservative Democrats and Republicans, which, once again is in operation, can be expected to exert considerable influence on such matters. However, these two statements are clear indications of administration thinking in areas of vital concern to the utility industry.

Historical Statistics of the United States

In 1909, the average weekly wage of manufacturing workers was $9.84. The price of a ton of pig iron in 1888 was $18.88. Expenditure per pupil in public schools was $13.63 in 1889. These statistical oddities are found among hundreds of thousands of facts related in the newly published book, *"Historical Statistics of the United States, Colonial Times to 1957."* This volume, compiled by the U. S. Bureau of Census, U. S. Department of Commerce, is now available to the public.

There are over 774 pages of tables and explanatory matter, which statistically chart the growth and development of the United States from colonial times to 1957. It offers proof of an unavoidable national togetherness which has been developing. In 1790, 4.5 people lived per each square mile of land area. In 1950, there were 50.7 people or ten times as many—per square mile.

The publication indicates that the best year for employment was in 1906. All but 0.8 per cent of the civilian labor force was working. That is the only year from 1900 to 1957 that unemployment was under one per cent. The worst years for unemployment were from 1931 to 1940 when the number of jobless totaled 8 to 12 million or 14 to 24 per cent of the civilian labor force.

As for wages, in 1909 the average hourly pay of factory workers was 19 cents. In 1957, the average was $2.07. During this period, trade unions grew to full bloom. In 1897, there were 447,000 workers enrolled in unions. By 1956 this number had grown to 18.4 million.

Prices, as we all know, have kept pace with the upward trend. In 1859, a ton of anthracite coal sold for $3.25; in 1957 the price was $14.67. Bread rose from about five cents a pound in 1913 to near 19 cents in 1957. In 1890, a quart of milk was six cents compared with 25 cents in 1957. Round steak sold for 12 cents per pound in 1890 and 74 cents in 1957. Margarine, however, sold for 41 cents per pound in 1919, about 11 cents higher than in 1957.

Nothing more vividly demonstrates the

growth of the nation, however, than the counting of telephones. In 1876, there were just 3,000. In 1956 there were over 60 million. This is an increase of one per 10,000 to 355 for every 1,000 population.

Other barometers of growth that are listed in this volume include such diverse subjects as the number of stamps issued, the number of patents issued, the growth of banks, expenditures for schools, and a host of other areas.

THIS publication gives vivid proof of America's vitality and growth. The personal well-being of the population, as reflected in the growth of income, is an endorsement of the free enterprise system and a sharp reply to the voices from behind the Iron Curtain. It seems a pity that such a publication cannot be put on every library shelf in Russia and Red China. Facts speak louder than the diatribes so often delivered against the free enterprise system of the United States.

This publication should be of interest to many persons in the public utility industry both from its historic viewpoint as well as from the standpoint of having a handy reference volume that offers contrasting figures for a number of commodities and services.

HISTORICAL STATISTICS OF THE UNITED STATES, COLONIAL TIMES TO 1957. Compiled by the United States Bureau of Census and the United States Department of Commerce, pp. 774. Available from the Superintendent of Documents, United States Government Printing Office, Washington 25, D. C. Price, $6.

USITA Management Development Program

THE United States Independent Telephone Association, last summer, conducted a Management Development Program at the University of Kansas. One of the participants in this program was Mitchell N. Drew, president of the Quincy Telephone Company, Quincy, Florida. Subsequently, Mr. Drew spoke to the Florida Telephone Association convention regarding his experiences in the training program.

Mr. Drew noted that the USITA's objective in sponsoring such training programs is to help the participating executives do more effective jobs in their positions and to ready them for more challenging responsibilities. At this particular program, there were forty-six executives from greatly diversified geographic areas. The executives represented all the various divisions found in any company—traffic, plant, accounting, engineering, etc. With such a diverse group, differences in policy are bound to be thrown into sharp focus. Mr. Drew stated:

> Differences in policy and practices were most apparent between the large companies and the small companies, as it would be easy to guess. There were many ideas expressed on merchandising, labor, direct distance dialing, radio and its applications, and many other items.
>
> Probably one of the most revealing differences was the practices followed by the large companies and the small companies in the matter of promotion to management. The large companies, of course, followed a set pattern developed and used through the years, and proved as the most productive and most reliable.

THE executives in the training program represented companies ranging

"LET'S START WITH THE BASIC PRINCIPLES"

from groups which had as few as 2,500 telephones in service to such giants in the field as General and Bell. Formal instruction was taught by the case study method. That is, a situation and pertinent facts are presented and the students familiarize themselves with background material. The problem is then investigated through group discussion. The general topics taken up were the following:

Control or Accounting

THIS section of the course placed emphasis on management's use of figures in making decisions. A considerable amount of time was devoted to the study of actual business situations, drawing upon illustrations from both within and without the telephone industry. There was, Mr. Drew indicates, some presentation of conventional accounting procedures and techniques but the focus was on the executive's use of figures in relationship to solving particular problems.

Human Relations in Business

THIS course was based on the assumption that the major factor in any ad-

ministrator's success is his ability to deal effectively with subordinates. Experience has indicated that the ability to understand the behavior of associates is not gained by a set of rules, and analysis and discussion of particular cases were used to explore this field. Such problems as communication failures, resistance to change, staff-line problems, and small group relationships were explored.

Merchandising

MR. DREW stated that in this particular course, attention was directed to the proper place of merchandising programs within the total company operations. This group also devoted some time to a consideration of problems of pricing, advertising, sales promotion, market analysis, and product selection. Extensive materials describing actual telephone merchandising techniques were used in addition to cases drawn from both telephone and nontelephone industries.

Administrative Policy and Planning

MATERIALS used in this class were of a broad nature that would integrate the other areas of the program into a meaningful whole. Specific topics considered were planning functions, anticipation of future developments, determination of objectives, and design of organizational structure.

The Business Climate

THIS course covered the broad area of the local, regional, and national community. It was designed to point out to the executives that a company is constantly molding society and, simultaneously, society is also molding the company. Mr. Drew observes that without such a focus, the administrator often tends to see himself and his company in "splendid isolation."

Rate Regulation

MR. DREW noted that this study group was planned for the particular interest of independent telephone executives.

It was scheduled for the last week of the program so that the participants would have a broader background for understanding many of the factors involved in rate structures, regulations, and proceedings before regulatory bodies. Through lectures and discussions, such topics as theory of regulation, trends in regulation, management's responsibility in rate regulation, and preparation of the rate cases were covered.

Mr. Drew stated that the instructors who taught these classes were drawn from the regular teaching staff of the University of Kansas School of Business, from the Harvard Business School, and from the University of Virginia. As an indication of the value of such classes, Mr. Drew said:

> I would like to close by *commending* the USITA Personnel Committee for its decision to hold and to sponsor schools of this and other types. Many, many telephone companies would not be able to provide their people with the necessary training to get a better job done if it were not for this concerted effort by our association. I can assure you that my classmates and I can testify to their long-term value to each of our companies.

IT is interesting to learn exactly how such programs are conducted. Mr. Drew related that a good deal of reading was required before the executives could discuss a particular point being studied.

The tenor of the sessions seems to have been informal, when compared with the

usual classroom procedure. Mr. Drew is emphatic, however, in stating that the program was of great and lasting value. This added emphasis to the fact that not all learning takes place in the traditional classroom atmosphere.

Notes on Recent Publications

ELECTRIC STATISTICS. The Federal Power Commission has recently released the 1959 edition of its annual report on statistics of publicly owned electric utilities in the United States. The new report, entitled "Statistics of Electric Utilities in the United States, Publicly Owned, 1959," contains financial and operating information on 326 classes A and B publicly owned utilities. Utilities in these classes are those having electric operating revenues in excess of $250,000 per year. Information included in the report was taken from annual reports filed with the commission by the utilities.

STATISTICS OF ELECTRIC UTILITIES IN THE UNITED STATES, PUBLICLY OWNED, 1959. Available through the Superintendent of Documents, United States Government Printing Office, Washington 25, D. C. Price, 65 cents.

ALASKA POWER STUDY RELEASED. The report of power hearings, conducted in Alaska by Senator Gruening (Democrat, Alaska), has just recently been released. The document, entitled *"Hydroelectric Requirements and Resources in Alaska,"* is a record of hearings held in Anchorage, Fairbanks, and Juneau in September of 1960. During these hearings, Senator Gruening acted as chairman of the Subcommittee on Irrigation and Reclamation.

The general purpose of the hearings was to explore the hydroelectric and other types of power potential in Alaska, which might be developed to provide low-cost power in the state. The hearings took particular notice of the development of Rampart Canyon dam as a long-range major project.

Testimony in the document contains the remarks of citizens of the three cities before mentioned, as well as residents of a number of smaller communities. Testimony of the Interior Department, the Corps of Engineers, and the Federal Power Commission is also contained in this document.

HYDROELECTRIC REQUIREMENTS AND RESOURCES IN ALASKA, pp. 259. Available free from Senator Ernest Gruening, Room 6313, New Senate Office Building, Washington 25, D. C.

NUCLEAR POWER COSTS. The Atomic Energy Commission has published a 40-page, revised version of "Costs of Nuclear Power." The original version of "Costs of Nuclear Power" was published in July, 1959.

The revised report includes information on several new reactor projects; breaks down, into major components, the capital costs of a number of U. S. and foreign nuclear power plants. The text and tables have been generally revised and expanded to include new data that became available during the third quarter of 1960. The report has nine major section headings: (1) Research and Development Costs; (2) Construction Costs by Major Categories; (3) Total Construction Costs; (4) Working Capital; (5) Annual Fixed Charges; (6) Fuel-cycle Costs; (7) Cost of Operation and Maintenance; (8) Total Generating Cost; and (9) Objective for Competitive Nuclear Power in the United States. Where the cost figures are available, the report cites 30 foreign nuclear power plants in addition to 22 plants in the United States.

COSTS OF NUCLEAR POWER (TID-8531). January, 1961. Available from the Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C. pp. 40. Price, 50 cents per copy.

The March of Events

Would Tighten Qualifications

REPRESENTATIVE Robert Casey (Democrat, Texas) has introduced a bill tightening qualifications for appointments to the U. S. Supreme Court. Casey said, in a statement accompanying his bill, that he had been "deluged" with requests that he bring impeachment proceedings against the Supreme Court.

He said the requests were "not from cranks or crackpots—but from honest, patriotic citizens . . . who are deeply concerned for the future of our nation because of recent decisions rendered by the Supreme Court."

Representative Casey said he understood and shared their concern, but that impeachment was not the answer. His bill, he said, "will require that future appointees to the U. S. Supreme Court must have had not less than eight years' judicial service as a justice, a judge of a court of appeals, or a district court of the United States, or a judge of a state court of the last resort having jurisdiction to interpret the state's Constitution."

FPC Examiner Upheld

THE Federal Power Commission has upheld the refusal of an FPC examiner to subpoena two top FPC officials to testify before hearings on conflicting applications to dam the Snake river.

The Washington Public Power Supply System had appealed to the full commission after FPC Examiner William Levy turned down the public power group's petition that the officials be forced to testify.

The officials whom attorneys for the WPPS asked be subpoenaed were Francis L. Adams, head of the FPC's bureau of power, and San Francisco's regional engineer, Lesher S. Wing.

California

Sees Oroville Completion In '68

GOVERNOR Brown, speaking near the future site of the Oroville dam, repeated his pledge last month that the huge dam will be completed by 1968. And in its initial stages, he told the Oroville area chamber of commerce, the dam will generate 600,000 kilowatts of electric power a year.

"I will assure you of something else," he said. "The credit of the state of Califorina can absorb the impact of prompt construction of Oroville dam."

The dam must be started immediately, he said, because "a continuing spiral of inflation poses the only problem to the financial feasibility of the state water program that merits serious consideration."

He noted that his 1961-62 budget allocates nearly $19 million for construction work on the Feather river project. Of this, more than $9.5 million is for the dam.

Connecticut

Increased Bus Fares Approved

THE Connecticut Company received permission last month to raise its single zone adult fares from 20 to 25 cents in the Hartford, New Haven, and Stamford areas. Under a revised fare schedule approved by the state public utilities commission, student fares will also be raised from 12½ to 15 cents in the Hartford and Stamford divisions. They already are at the 15-cent level in New Haven. The new fares may become effective after at least five days' notice, the state public utilities commission said.

The commission granted all but one of the fare changes requested by the company. A proposal that tokens be sold in the Hartford area at the rate of four for 90 cents was amended by the commission to a rate of four for 85 cents.

The new fares will add about $878,000 annually to the company's gross revenue, the commission said. The company had estimated that its proposed schedule, with the 90-cent token rate, would have provided about $1 million each year.

Michigan

More Suburban Gas Planned

CONSUMERS POWER COMPANY has announced a $12 million improvement and expansion program for this year in an 800-square-mile area north and west of Detroit. The area includes Royal Oak, Pontiac, East Detroit, Plymouth, Livonia, Birmingham, and Mt. Clemens.

Major projects will be installation of more than 238 miles of gas mains, with an addition of about 21,500 customers, a company spokesman said. The existing distribution will be improved system, and production and pumping facilities will be expanded at the Northville gas field.

The program is part of the company's $98 million expansion and improvement plan for 64 outstate counties.

Montana

House Passes Anti-PUD Legislation

A BILL to prevent public utility districts in other northwestern states from building dams in Montana was passed by the lower branch of the state legislature and sent to the state senate. The measure was sponsored by Representative Hazelbaker of Beaverhead, who called it an "anti-PUD bill."

He said it was "aimed at a cancerous growth from Washington which I consider worse than Communism."

The bill would prevent the transfer of property used in generation or transmission of electric power to municipal or governmental organizations organized under

laws of another state. Exempted from the proposal's provisions would be private utilities and rural electrification associations.

New York

Commission Issues Directive

THE state public service commission has issued a directive to all electric utilities in the state requiring them to advise the commission of the steps they have taken or are taking in endeavoring to recover damages from the manufacturers of electrical equipment who were involved in federal court proceedings concerning the fixing of prices in violation of the antitrust laws. It disclosed that for some time prior to the recent decision of the federal court, the staff of the commission had carried on an informal investigation of the purchases by New York electric utilities from the manufacturers involved.

The commission said that the legal, technical, and practical involvements of any actions that may be taken by any utilities are exceedingly complex, and both the length of time and the outcome of any actions undertaken are dependent upon many uncertainties.

Pennsylvania

Effects on Power Rates Checked

THE state public utility commission has ordered ten Pennsylvania power companies, including Duquesne Light Company of Pittsburgh, to determine if rigged equipment bids have affected their rates. The companies were instructed to conduct studies of their purchases from 32 electrical equipment manufacturers convicted of price fixing in a vast antitrust suit prosecuted by the federal government.

The Pennsylvania utilities named in the commission's order serve 3.5 million customers. Commission Chairman Schwartz ordered them to supply his agency with bid information as soon as possible. He also asked the companies to disclose, in detail, whether legal action is planned to recover any losses.

Federal law permits aggrieved parties to sue for triple damages in antitrust cases.

However, a commission spokesman said there was no way of telling now whether recovery of possible damages from manufacturers might actually produce savings or refunds for consumers.

Lower Street-lighting Rates Approved

A REVISION in Philadelphia's agreement with the Philadelphia Electric Company, which would cut the city's street-lighting bills by some $633,000 over the next five years, was authorized last month by the state public utility commission. The commission approved a petition filed by Philadelphia Electric at the request of the city on February 14th. The revisions were effective March 1st.

After 1965, the changes will permit the city to save $212,000 annually on street lighting, the commission said. The rate changes were made possible through the city's continuing program to improve lighting techniques and control equipment. Part of this program is the conversion of street lights to individual photocell control units, which, the commission said, will end widespread power failures.

Area Rates Reduced

UNITED GAS IMPROVEMENT COMPANY, Philadelphia, has been authorized by the state public utility commission to reduce rates an estimated $51,000 annually, effective March 1st, for 3,601 of its 47,700 Luzerne county electric division customers.

The commission said the move was to promote electricity for heating, automatic hot water, and off-season industrial use.

Texas

REA Loan Approved

THE Rural Electrification Administration has notified U. S. Senator Ralph Yarborough (Democrat) that it has approved a $572,000 REA loan to the Upshur Rural Electric Co-operative at Gilmer.

Yarborough said most of the money will be used to build 100 miles of new distribution lines. The remainder will be used for remodeling the headquarters office in Gilmer.

REA Called Threat

PRESIDENT W. W. Lynch, Dallas, of the Texas Power & Light Company, told the house state affairs committee recently that investor-owned companies could be wiped out if the present government-supported REA facilities were allowed to continue to serve city-annexed areas in competition. He stated:

> This is not to discredit the electrical co-ops, for in their own sphere they have done a good job. But if it is carried to its ultimate limits, it would destroy the source of much technological progress and remove from the rolls important taxpayers and builders in our area.

Lynch was testifying against a bill by Representative Alonzo Jamison of Denton that would permit the co-operatives to continue to hold on to customers after they have been annexed by cities and towns. Lynch said that investor-owned power companies in Texas last year paid out $135 million in taxes as against $666,152 paid by co-ops.

The bill was sent to a subcommittee.

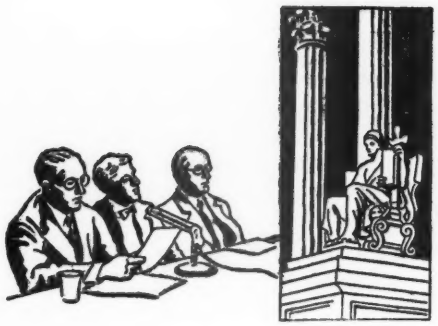
Washington

New Power Block Incorporated

PACIFIC POWER & LIGHT COMPANY reported last month that it has taken 136,000 kilowatts of electric power into its system as its share of the output of six large generators at the Priest Rapids powerhouse on the Columbia river in Washington state.

A spokesman for the utility said the new block of power was entering the system in Yakima county and being delivered from the main-stem Columbia development over PP&L's large-capacity transmission line to its Union Gap substation near Yakima. The company will be receiving more than 223,000 kilowatts of the total output of Priest Rapids when all ten of the 78,500-kilowatt generators are in service, it was said.

PP&L has under contracts the largest single blocks of the output of both Priest Rapids and the companion 570,000-kilowatt Wanapum development.



Progress of Regulation

Trends and Topics

Antitrust Law Violations by Manufacturers As They Affect Utility Customers

ELECTRIC utility companies which have purchased equipment from companies violating the antitrust law are now faced with several problems. Should they sue for treble damages? Can they prove the amount of damage sustained as a result of price fixing? Should they negotiate settlements with the electrical equipment companies? If they do recover damages, what will be the impact on their customers? This last question brings the matter into the regulatory field.

The suggestion has been made that utility companies be required to pass on to customers, as a refund, any amounts recovered for overcharges. Aside from the question of refunds, there are questions relating to retroactive rate making, nonrecurring revenues, past profits as affecting future rates, and rate base cost adjustments which may result from the collection of damages.

Directive Issued by Florida Commission

The Florida commission, on February 13, 1961, stepped into the picture when it issued a directive to all privately owned electric utilities. The commission said that there is a strong probability that these utilities will be entitled to substantial refunds from the convicted companies from which they have purchased equipment. If these violations of the antitrust law have resulted in the overpricing of electrical equipment sold to utilities under the commission's jurisdiction, then the investment of the utilities may also be correspondingly, "albeit in good faith," overstated, and such overstatement would be reflected in rates. Therefore, the commission directed all electric utilities under its jurisdiction:

"1. To promptly advise the commission of the investigation they are making to ascertain the extent of overpricing by these suppliers.

"2. To promptly advise the commission of the steps which they are taking to secure any refunds to which they may be entitled.

"3. To fully inform the commission concerning purchases from these various firms during the past ten years.

"4. To take all necessary steps to protect their rights to possible refunds."

How Customers May Benefit

Chairman Lundy of the New York commission, in response to a statement that consumers should share in any cost reduction and any recovery of past overcharges, said that any reparations obtained by electric utilities will "inure to the benefit" of electric users. The Florida commission's reference to overstatement of investment, without fault on the part of the utilities, indicates the course most likely to be followed. Adjustment of original cost figures would benefit utility customers when new rates are fixed to produce a fair return on an adjusted rate base.

Established regulatory principles would seem to bar refunds by electric companies. Rates are not fixed retroactively except when rates are increased under bond or temporary increases are permitted. Rates are fixed for the future regardless of past profits or losses. Nonrecurring expenses and revenues are not the basis for future rates. Legally established rates are a bar to a claim for reparation. This latter principle has often been stated, as in a U. S. Supreme Court decision under the Federal Power Act (88 PUR NS 129).

Moreover, as a matter of fact, the utility investment will not be lowered until a refund from the equipment company is received. Adjustment of past rates or refunding of amounts collected from users of electricity would result in depriving the utility of property.

Another interesting question may be raised. Even though a refunded overcharge is applied to reduce original cost, do the ratepayers or the stockholders get the benefit of damages collected as a penalty under the "triple-damages" rule?

Review of Current Cases

Final Step in Holding Company Dissolution Program Approved

THE Securities and Exchange Commission approved a plan proposed as the final step in a program for the liquidation and dissolution of Standard Gas & Electric Company and its wholly owned subsidiary holding company, Philadelphia Company. The plan provided, among other things, for distribution to Standard's stockholders of the portfolio securities and cash of the two companies. The securities to be distributed consist of 160,108 shares (1.5 per cent) of the common stock and 24,264 shares of $50 par preferred stock of Duquesne Light Com-

pany, a former public utility subsidiary, as well as its portfolio securities of Wisconsin Public Service Corporation, another former subsidiary.

Under the plan Standard will distribute to its own stockholders (a) Duquesne's common stock at the rate of eight shares thereof for each 100 shares of Standard common stock held; (b) Duquesne's $50 par value 4 per cent preferred stock at the rate of one share thereof for each 100 shares of Standard common stock held; (c) Wisconsin common stock at the rate of three shares thereof for each 100 shares of Standard common stock held; and (d) $1.30 in cash for each share of Standard common stock held.

Intercompany Agreements

The plan also provides that Duquesne will assume all liabilities which Standard and Philadelphia may be found to have with respect to certain federal income and excess profits taxes for the years 1942 through 1950. In return for this assumption Standard will pay Duquesne $3.5 million and assign to Duquesne the rights which Standard has under tax agreements with former subsidiaries, relating to the years 1942 through 1950, particularly a payment due Standard by Equitable Gas Company, a former subsidiary, in an amount estimated at $781,000.

Duquesne will become entitled to receive and retain all refunds of federal taxes on income for such years which might thereafter be received and to which Standard or Philadelphia otherwise would be entitled. In addition, Duquesne will assume, for a cash payment of $50,000, Standard's contingent liability to Wisconsin, another former subsidiary, arising out of the method of accounting for income tax purposes for the expenses of Wisconsin's changing over to natural gas service in the years 1946 through 1950.

Necessity and Fairness of Plan

At the outset the commission held that a plan is "necessary" under § 11(e) of the Holding Company Act, if it provides an appropriate means for achieving the results required by § 11(b). Under this plan, both Philadelphia and Standard will be liquidated and dissolved, thereby effectuating compliance with the dissolution orders directed against each company. The commission noted also that the plan must be financially feasible, if it is to be approved.

The commission concluded that the plan was necessary since it provided for the satisfaction of all possible claims against each company and the distribution to the shareholders of the parent company of the portfolio securities and cash held by these companies.

Tax Agreement

The commission also concluded that the cancellation of the existing tax agreement between the holding company system and the former subsidiary and the substitution of a new tax agreement were fair and equitable to the parties affected. It so held after reviewing the negotiations between Standard and Duquesne leading to the new agreement and the various possible results of the tax litigation with the Internal Revenue Service, and the economic effect upon both Standard and Duquesne, and their respective security holders, of such litigation. It observed that the negotiations were conducted at arm's length by well-informed adversaries, in which each side carefully considered all aspects of the facts and issues involved and the resultant economic effects upon each.

The commission reached the independent conclusion that the proposed tax agreement fell within the range of reasonableness.

Indemnity Agreement

The commission also upheld the assumption and indemnity agreement between Standard and Duquesne whereby Standard agreed to pay to Duquesne $50,000 and the latter agreed to assume and hold Standard harmless from any liability which Standard might be found to have with respect to a tax claim asserted by Wisconsin. The commission pointed out that the ability of Duquesne to assume the possible liability of the holding company to Wisconsin was unquestioned. It said that the controversy related primarily to an interpretation of federal tax laws. The cash payment was arrived at as a result of arm's-length bargaining and appeared to represent a fair payment for the risks involved.

Wisconsin had argued that a hardship would be imposed upon it if it were required to litigate with Duquesne rather than with Standard. The commission disagreed, however, saying that if Duquesne was financially able to respond to any damages which might ultimately be found due to Wisconsin, it made no difference that the latter company was required to litigate with Duquesne rather than with Standard. There was no question of Duquesne's ability to respond to any damages which might ultimately be found to be due to Wisconsin. The commission observed that the question involved primarily a question of tax law and said that it would be preferable that the issues with respect to the proper application of the federal tax laws be determined by the tribunals created for that purpose, rather than by it. *Re Standard Gas & E. Co. et al. File No. 54-191, Release No. 14352, January 19, 1961.*

Dividends and Salaries Restricted for Debt Financing And Prepayment Restriction Modified

BECAUSE Stockbridge & Sherwood Telephone Company will have a high debt ratio of 67 per cent upon the issuance of new debt securities to finance dial conversion, the Wisconsin commission attached conditions to its authorization of the securities in order to insure a prompt reduction in the debt ratio. The company was granted authority to issue $140,000 principal amount of interim mortgage notes, maturing not later than three years after date, and the same amount in a 20-year mortgage note to be used for the retirement of the interim notes. Both issues are at 6¼ per cent interest, though the long-term debt interest will be reduced to 6 per cent when the ratio of debt to total capitalization and surplus has declined to 60 per cent and the net income has become equal to twice the annual interest charges.

Estimating the company's income on the basis of a 6.5 per cent return on total capitalization and surplus, the commission considered it necessary that a substantial portion of such income be retained in surplus so as to increase the common equity. Thus, a limitation was placed on cash dividends on common stock until the debt ratio is reduced below 60 per cent of total capitalization and surplus. Thereafter, annual dividends may not exceed 50 per cent of current annual common earnings until the debt ratio falls below 50 per cent. This limitation, together with a restriction on increases in salaries of officers, directors, and other management personnel, as provided in a loan agreement with the equipment supplier, will insure that substantially all net income generated by the business will be

retained by the telephone company.

Call Premium Authorized

Under the loan agreement, no prepayment penalties would be imposed as long as the equipment supplier or a participating bank holds the notes. However, in the event they are negotiated to a long-term investment source, the agreement provided that no prepayments could be made during the first ten years after issuance except from internal sources. The commission considered such a restriction on redemption an unreasonable one since it restricts prepayment for too long a period and prohibits payment of debt even from funds supplied by additional common stock issues.

It is considered reasonable, in conformance with sound financial practices and in the best interest of utilities, that debt be callable upon payment of a reasonable premium, said the commission. By the common practice among Wisconsin utilities issuing debt securities under competitive bidding procedures, the period within which an issue may be called is not limited. On debt issued and sold through private negotiation, a five-year freeze is sometimes imposed on redemption privileges, it was noted.

The commission thought it reasonable that the long-term mortgage note be callable on any interest date, and so provided, subject to the payment of a premium of 6 per cent of the face value during the first year after issuance, with the premium declining at a rate of .25 per cent of face value each year thereafter. This provision would be subject to the further provision, however, that the debt would not be redeemed during the first five years from the proceeds of any other debt issued by the company. *Re Stockbridge & S. Teleph. Co. 2-SB-812, December 23, 1960.*

CATCO Requirements As to Price Line Discussed on Review of Initial Gas Producer Price

THE federal appeals court for the ninth circuit declared that it would be an abuse of discretion for the Federal Power Commission, in establishing a price line as a basis for the certification of natural gas producer sales, to rely upon producer prices which are under the cloud of court or commission review. The court went further and indicated that where a substantial number of certificated prices are under court or commission review, like prices in the same area though not currently under review ought to be regarded as suspect. Such prices should not be relied on in fixing a price line except upon evidence that they are not subject to the same infirmities being tested in current proceedings.

When an order certificating an initial rate is under court or commission review, said the court, it is possible that the certificate may be eventually denied or price conditions may be attached. An existing rate subject to such a hazard does not provide a reasonably reliable basis upon which to predicate a price line.

The court held that the commission had fallen short of the CATCO (29 PUR3d 70) requirements with respect to comparing prices under review, in fixing a price line by which to test a total initial price of 23.8 cents proposed by two producers, The Superior Oil Company and The California Company, lessees of fields in Louisiana, who sought, and obtained without conditions, certificates for sales

to United Gas Pipe Line Company.

The court also held that where parties to present proceedings were denied the right to participate in prior proceedings, and such denial was not judicially challenged, the fact of denial should not preclude the commission from referring to the initial price certificated in the prior proceedings in fixing a price line in the present proceedings. But the prior certificated price should not be so used if the denial of intervention is being questioned in the courts.

"Scrutiny" of Compared Prices

The appeal from the commission's certification of 23.8 cents (including 2.3 cents tax reimbursement) was taken by United Gas Improvement Company, operator of the municipally owned gas works of Philadelphia. United, Superior, California, and the New York commission intervened in the appeal proceedings. It was contended before the court that the price was too high.

The fact that the commission has control over the initial price does not mean that before certificating a sale the commission must determine that the proposed initial price is just and reasonable. It means, rather, that there should be "a most careful scrutiny and responsible reaction to initial price proposals," the court pointed out. Under the CATCO decision a permanent unconditional certificate should not be issued where the proposed price is not in keeping with the public interest "because it is out of line or because its approval might result in a triggering of general price rises or an increase in the applicant's existing rates by reason of 'favored nation' clauses or otherwise." In the instant case, the commission had found that the proposed price was not out of line and, therefore, attached no conditions.

The court observed that the "hold the line" technique spelled out in CATCO is a stopgap device to afford stand-by protection to the public pending normal rate adjudicatory proceedings while enabling the commission to act upon certificate applications with reasonable dispatch. The "line" may be based on relevant existing producer prices under which substantial amounts of natural gas move in interstate commerce. Where such prices are those paid by other pipeline companies, it is especially important that they be consulted for comparative purposes.

Existing producer prices are relevant for comparative purposes only if they pertain to gas production in the same or an analogous area and if other principal features of the contracts are fairly comparable. But relevancy does not require examination into factors such as relative production costs which are not reflected in specific terms of the contracts. Nor must the price line necessarily accord with the pre-CATCO line, for the price line is intended to reflect current conditions in the industry.

It was argued that if prices paid by other pipeline companies may be resorted to for comparative purposes, the comparison must at least be limited to prices which have been authorized only after the commission's careful scrutiny according to CATCO standards. The court held, however, that the consideration of producer prices not previously scrutinized does not indicate an abuse of discretion.

Tax Reimbursement

In deciding that the initial price proposed by Superior and California was not out of line, the commission did not consider the 2.3-cent tax reimbursement feature.

Tax reimbursement, however, is an item for bargaining between producer and

pipeline company. The court thought that comparative tax reimbursement plans as well as comparative base rates ought to be considered in determining whether a proposed initial price is out of line. Except where the difference in tax reimbursement features is relatively insubstantial, said the court, the failure to take account of such a difference is an abuse of discretion.

Adequacy of Evidence

Finally, the court noted, respecting the adequacy of evidence, that a comprehensive showing such as would be required in a rate proceeding is not necessary in a certificate case. Nevertheless, where the commission relies upon existing certificated rates in establishing a line, evidence ought to be submitted concerning those rates. The contracts should be identified, and each should be subject to test as to arm's-length bargaining, identity or similarity of gas production area, nature of gas reserves, quality of gas, facilities to be provided, and services to be performed.

The commission's order granting unconditional certificates was set aside and the case was remanded. *United Gas Improv. Co. v. Federal Power Commission, 283 F2d 817.*

Rate Settlement Offer without Supporting Data Properly Rejected in Gas Producer Rate Case

On petition to review an order of the Federal Power Commission rejecting a settlement offer in a natural gas producer rate investigation, a federal appeals court pointed out that before such an offer can stay a rate investigation in progress, "it must be accompanied by supporting data so clear and convincing of the fairness of the compromised rate as to leave no doubt in the minds of reasonable, well-informed persons as to the correctness of the compromised rate."

But the offer made by the petitioner in this case, Amerada Petroleum Corporation, presented no such data. The rate under investigation was 18½ cents per Mcf, and the settlement offer was 18¼ cents. Elimination of a price redetermination provision was also offered. It appeared that the commission had already fixed a rate of 18¼ cents for a co-owner in Amerada's common pool. Amerada contended that it was entitled to a like rate as a matter of law and urged that the commission had acted arbitrarily in rejecting its offer.

The petitioner's conclusion does not follow, said the court. That the co-owner was allowed a rate of 18¼ cents does not mean that Amerada is entitled to the same rate as a matter of law. Many factors determine what is a fair and equitable rate, and what may be fair for one may be unfair for another. While investigation may establish that 18¼ cents is a fair and equitable rate for Amerada, that can only be found when all the facts have been fully developed.

No Rights of Producer Denied

The commission's rejection of the offer does not deprive Amerada of any right it has under the law, the court observed. If the producer believes 18¼ cents is a lawful rate, it can file the rate and begin charging it without fear of the commission's investigating powers. By its offer of settlement and compromise, however, the producer had sought to force the commission to accept 18¼ cents without a showing that this rate was fair and reasonable and without further power on the

part of the commission to investigate and determine the reasonableness of it. The court held that the commission did not act arbitrarily in refusing to approve the offer, which would have prevented it from investigating the fairness of the proposed rate. The petition for review was, accordingly, dismissed. *Amerada Petroleum Corp. v. Federal Power Commission, No. 6395, November 7, 1960.*

Rolling in of Gas Costs Disapproved for Pipeline Rates And Zoned System Retained

THE Federal Power Commission modified and adopted an examiner's decision on the governing principles to be applied in five-year-old proceedings by United Gas Pipe Line Company for rate increases of about $16 million. The issues covered by the examiner include (1) proper disposition of charges to Account 100.5 (Gas Plant Acquisition Adjustments), (2) appropriate method of allocating cost of service, and (3) proper rate of return. The rate increases, requested in 1955 and 1956 and suspended by the commission, became effective subject to refund in 1956.

Upon denial of motions by some of United's customers to reject the increases on the ground that United's contracts did not provide for them, the question was appealed, and the Supreme Court affirmed the right of United to make unilateral rate filings where the contract reserved to the seller the right to change its rates (26 PUR3d 314).

The Cost Allocation Issue

Four proposals were offered on the issue of a proper allocation of United's costs: (1) United proposed to increase the number of zones and further segregate and allocate specific gas sources and facilities to specific customers; (2) several interveners sought to preserve the so-called Method 8 (a system of basic zones) as approved by the commission in the company's last rate determination and as upheld by the courts; (3) the examiner thought the best allocation method was to retain Method 8 with regard to transmission cost allocations but with a "rolling in" of all gas purchase costs; and (4) the staff proposed to combine United's southern zones, leaving only three zones for transmission cost allocations, and to roll in all costs of purchased gas. The examiner adopted the last method, in which different purchased gas costs would be rolled in. He indicated that in a system such as United's—integrated, efficient, and flexible—it was not reasonable for customers in one zone of the service area to pay rates disproportionately higher than rates paid by customers in another zone.

The commission modified the examiner's decision on this issue. It did not appear that a departure from Method 8, as approved by the commission and the courts, had been justified. Although United urged that some shifting of costs to jurisdictional customers was necessary to preserve nonjurisdictional services at competitive rates acceptable to local regulatory agencies, the commission thought Method 8 afforded a fair division of costs between jurisdictional and nonjurisdictional customers and indicated that United should not be allowed to shift all later cost increases onto its jurisdictional customers in order to preserve low rates before local regulatory bodies.

In support of rolled in gas costs, the ex-

aminer noted that the greatest increase in gas costs to United had occurred from sources in southern Louisiana and that, therefore, customers receiving southern Louisiana gas would be forced to pay a larger share of United's rate increase than customers served primarily with gas from Texas and northern Louisiana sources. It was further argued that since United's system was wholly integrated, there was no basis on which to separate sources supplying different parts of the system. After discussing the company's flow of gas from southern Louisiana and from southern Texas, the commission found that a rolling in of all gas costs would cause an unreasonable shift of costs to the southwest and central zones, would be contrary to the historical rate design of the system, and would place an undue burden on United's nonjurisdictional customers who would receive no benefit from United's purchases in southern Louisiana.

Rate of Return

The commission sustained the examiner's allowance of a rate of return of 6¼ per cent. The capital structure of the parent company was considered in this allowance, and a 10 per cent return on equity was regarded fair in view of United's conservative financing. Arguments for lower and higher rates of return were based on judgment differences and not on any compelling legal considerations, the commission indicated. Furthermore, the rates here involved were for locked-in periods several years ago when conditions in the money market were different from present conditions.

Interest, Gas Cost, Acquisition Adjustment

Questions were raised regarding the treatment of federal income taxes in United's cost of service. United included a figure based on its own interest costs, though payments made under a consolidated return with affiliates may have differed somewhat from the figures included in the cost of service. Evidence as to the consolidated tax filings was not available at the hearings. The commission accepted the tax liability as set forth in United's proposed cost of service as the most realistic figures available. It observed, however, that the tax information in the consolidated returns should be made available with later rate filings.

The commission held that the examiner was correct in including in United's cost of service, payments to Union Producing Company, an affiliate, for gas purchases based on the legally effective June 7, 1954, contract prices. However, amounts paid to Ohio Oil Company and Magnolia Petroleum Company in excess of the June 7, 1954, contract rates could not be included.

The commission sustained the examiner in excluding from United's rate base, charges to Account 100.5, representing a portion of the acquisition costs of the company's facilities in excess of original cost. *Re United Gas Pipe Line Co. Docket Nos. G-9547, G-10592, January 4, 1961.*

Natural Gas Producer Sales Compelled Beyond Contract Term

THE Federal Power Commission has jurisdiction to compel an independent producer of gas to continue a sale to an interstate pipeline company even though the sale was commenced under a short-term contract that has since expired, a

federal appeals court held. Once a producer has dedicated his production to interstate commerce, and has thereby become subject to the jurisdiction of the commission, he remains under that jurisdiction so long as production continues.

Harper Oil Company, whose service contract with Cities Services Gas Company—at six cents per Mcf—had expired, sought permission under § 7(b) of the Natural Gas Act to abandon service. Other arrangements had been made to sell the same gas for 11 cents per Mcf. It was urged that abandonment would free compression power for use in recovering currently wasted low-pressure gas, thus resulting in conservation of gas supplies. It was also contended that Cities Service did not need the supplies here involved, which amounted to only two-tenths of one per cent of the pipeline's gas.

The examiner's opinion, adopted by the commission, had found that Harper's existing plant was adequate to provide for the conservation mentioned by the producer, as well as to furnish the necessary compression for the sale sought to be abandoned. Also, it was found that Cities Service had a true need for the gas.

Effect of Contract Termination

The producer unsuccessfully argued that the expiration of its service contract terminated commission jurisdiction. The court observed that the precise question was decided in the commission's favor by the Supreme Court in the Sunray Mid-Continental Oil case (34 PUR3d 151).

While the court agreed with Harper that the conservation matter was a proper one for commission consideration in the abandonment proceeding, the administrative disapproval of abandonment was, nevertheless, sufficiently supported by substantial evidence. Even though the sale amounted to only two-tenths of one per cent of the pipeline's gas, the producer's crucial delivery point was important to the maintenance of adequate pipeline service to the public. This gas was needed to make up deficiencies in a portion of the line during the winter months of peak consumption. *Harper Oil Co. v. Federal Power Commission, 284 F2d 137.*

FCC Daytime "Sky Wave" Radiation Order Affirmed

THE U. S. court of appeals has affirmed a lower court's refusal to review and set aside a Federal Communications Commission order dealing with the problem of interference caused by daytime "sky wave" radiation. "Sky wave" interference is produced when radio waves radiated into space are refracted back to the earth by the ionosphere. Because of daily changes in the action of the ionosphere which impair its capacity to reflect back sky wave signals during daylight hours, such interference is a factor chiefly in the two-hour periods before sunset and after sunrise, during which time sky wave radiations gradually build up to and decline from their nighttime peak.

The court concluded that the FCC order was not an abuse of the commission's broad powers. The solution the commission had reached was a reasonable balance between permitting excessive interference and imposing prohibitive restrictions on class 2 stations. It was adequately substantiated by the evidence. *Clear Channel Broadcasting Service et al. v. United States et al. 284 F2d 222.*

Denial of Telephone Rate Increase without Adequate Hearing and Findings Reversed

THE Nebraska supreme court reversed a commission order denying a telephone company a rate increase. The company operated magneto service to 287 customers in the area. It had 15 rural lines. It employed two switchboard operators, one receiving $65 a month with $5 deducted for house rent. The other received $60 per month. The company asked for rates sufficient to increase the pay of these operators to $105 and $100 per month, respectively.

The company had not had sufficient revenue to employ a lineman since the spring of 1959. System maintenance had deteriorated. It had had no regular bookkeeper since August, 1959. It claimed a total investment as a rate base of $23,730.43. It had had a net earning, on that base, of $41.09 for 1959. The increase requested was calculated to produce a return of 4.94 per cent.

One commissioner had held an initial hearing on the company's application but had made no report or recommendation to the commission, unless it had been a secret one. The commission, without affording an opportunity for argument, without ruling on an objection to evidence which had been made in the initial hearing, and without setting forth reasons for doing so, had denied the application. Such action was in violation of the commission's rules, the court held, and it denied the company due process of law.

The court pointed out that, on the evidence produced, the company had been denied a fair return on invested capital, even on the value fixed by protestants. It had been denied the revenue to secure necessary employees to maintain and operate its plant. It had been denied the opportunity to pay employees an adequate, reasonable wage. It had been denied the revenue necessary to put its plant in a condition to render reasonable service.

The company's patrons had been denied the service that public convenience and necessity entitled them to.

The court pointed out that of the almost 300 patrons of the company, only two witnesses had appeared against the allowance of the application. One of them was admittedly interested in having the company sell its assets to another company. The other had taken the position that the company should first rehabilitate its lines and modernize its plant before being granted an increase.

The case was remanded to the commission, with directions to give full, adequate, and fair consideration to the application, and to make findings of fact. In that way, if the commission's decision should be appealed, the court would be able to determine whether the evidence was sufficient to sustain the commission's order. *Re Oakdale Teleph. Co. 106 NW2d 486.*

Realty Company Engaged in De Facto Public Utility Operation

THE Connecticut commission, after investigating the public utility status of a real estate corporation, decided to treat its operation of a water system as a de facto public utility where the acts of the company were ultra vires, in violation of a statute prohibiting certain corporations from transacting business of a water com-

pany. The alternative, the commission pointed out, would have been to order the company to cease activities until it obtained proper authority from the legislature to conduct a water company. This would not have been consistent with the public interest.

The company had contended that its customer contracts disavowed any intention to dedicate its facilities to the public service. It also maintained that its corporate structure negated public utility status.

To constitute operation as a public utility, said the commission, there must be a holding out to serve the public generally, for an indefinite period of time, at uniform rates. Whether or not a company is a utility does not depend solely upon the wishes and declarations of the owner, since dedication to public use is a question of intention which may be shown by circumstances. In this case, the company's acts constituted a holding out in fact of service to a particular group of the public, which was determinative of dedication to the public, notwithstanding the owner's avowed and sincere intention not to make such dedication. *Re B. H. Realty, Inc. Docket No. 9981, January 24, 1961.*

Mutual Company Serving Stock Lessees Held to Be Public Utility

THE California supreme court affirmed an order of the commission which held that a water company, though organized as a mutual, was a public utility subject to commission jurisdiction. A dispute arose when the mutual, the appellant in this case, sought to increase its rates for water supplied to a water company customer, a public utility and stockholder in the mutual. Only the question of public utility status was presented on review.

The mutual initially supplied water primarily for irrigation purposes, while at the present time most of its sales are to domestic users. With the exception of one domestic user, it supplies water only to its shareholders and lessees of shares from shareholders. Its shares are freely transferable and are not appurtenant to the land.

The company has maintained a list of shareholders who were willing to lease shares and has referred nonshareholder applicants for service to them. Recently it split its stock to increase the number of permissible service connections.

Notwithstanding these facts, the mutual contended that it has not held itself out to serve the public and that it has not, therefore, dedicated its property to public use. The court thought, however, that the evidence supported the commission's finding of dedication. It was pointed out that the mere fact that the water company was organized as a mutual would not preclude a finding of dedication if it had held itself out to serve the public. Dedication in this case was readily inferred. There was no evidence that anyone in the mutual's service area who wanted water service could not obtain it by purchasing or leasing a share.

Not within Exemptive Statute

It was argued that even if the property had been dedicated, the company was, nevertheless, exempted under a statute providing that any water company or association which is organized for the purpose solely of delivering water to its stockholders or members at cost is not a public utility and is not subject to com-

mission jurisdiction. Plainly, however, the mutual delivered water to others than stockholders; it delivered water to more than 100 lessees of shares and one other user. Lessees of shares are not stockholders, said the court, and to interpret statutory "stockholders" to mean "stockholders or lessees of stock" would not only read into the statute words that are not there but would violate the basic principle of customer control on which the exemption was based. *Yucaipa Water Co. No. 1 v. California Pub. Utilities Commission, 357 P2d 295.*

Utility Status of Mutual Water Company Involves Integrated Operations with Utility Company

In sustaining a commission decision that a mutual water company had dedicated its facilities to public use and was in fact a public utility subject to regulatory jurisdiction, the California supreme court noted that the mutual had provided unlimited service to a water utility company which it had formed, that it had condemned property for public use, and that it had directly served anyone in its service area who became a stockholder.

The commission was also sustained in denying the utility company permission to sell a well to the mutual. The company alleged that it could not lawfully pump water from the well, while the mutual could. It was held that the commission properly refused to allow the sale until the right to pump had been litigated.

The utility company was created by the mutual and, though it held about one-fifth of the mutual's stock, it was controlled by the mutual through common officers and directors. The mutual furnished the company's water supply to meet the requirements of the latter's customers. The physical operations of the two systems were closely integrated, and each in some instances served the other's customers.

Not Bona Fide Stockholder

The mutual claimed exemption from regulation under an exemptive statute covering corporations and associations organized solely to serve their stockholders. The word "stockholder" in this statute, said the court, means a bona fide stockholder that is free independently to exercise its voice in management and to enforce its legal rights. The utility which the mutual controlled and supplied with water was not such a bona fide stockholder, since it had no voice in the management of the mutual and, as a creature of the mutual, was in no position effectively to enforce its rights as a stockholder. To hold that such a captive stockholder is a stockholder within the meaning of the exemptive provision would violate the principles on which the statute was based, the court declared. *Corona City Water Co. et al. v. California Pub. Utilities Commission, 357 P2d 301.*

Railroad Station Agency Discontinuance Justified

The Louisiana supreme court affirmed a lower court judgment setting aside a commission order denying a railroad permission to discontinue an agency station. The loss incurred by the railroad in continued operation, combined with the showing that public convenience and necessity would not be adversely affected

by the closure, were held determinative of the issue.

The rule in regard to discontinuance of an agency station, pointed out the court, is a determination of the public convenience and necessity in relation to such service and the expense of the operation as compared with the revenue therefrom. The circumstances which should be considered are the volume of business done at the station, proximity to other stations, acccessibility, cost of maintaining such agency station, financial loss, if any, to the railroad, due regard for the welfare of the public, and the probabilities of future development.

Railroads No Longer a Monopoly

Railroads have played a very important part in the building of our vast nation and in its economic development into the present industrial leadership of the world, the court said. There was a time when the railroad had a monopoly in the transportation of freight and passengers. However, in the present motor age the railroads are in tough competition with private passenger cars, buses, and truck lines transporting freight and passengers over a vast system of improved highways built and maintained by public funds, as well as pipeline carriers. They are also in competition with governmental subsidized waterways and airlines.

Forced Operation at a Loss Leads to Bankruptcy

Regulatory bodies, therefore, have the duty to view the entire picture with long-range consideration. The court assumed that a business as large as the railroad was operated by competent men experienced in the field. When their operations were throttled and stifled to the extent that they were forced to maintain economic losses through the operation of certain stations, the court said, it had to look for the necessity and inconvenience occasioned the people using the station and weigh that against the losses in service and efficiency to the majority, which logically resulted from drain on revenues.

To force a railroad to continue losing operations which, from the evidence, show a steady decline over a period of years will inevitably result in bankruptcy for the railroad and assumption of management by the federal government or in decreased and less efficient service, maintenance, and equipment. *Illinois C. R. Co. v. Louisiana Pub. Service Commission et al. 125 So2d 159.*

Other Recent Rulings

Rate Interpretation. In deciding a motor carrier claim for additional compensation from the federal government, the U. S. court of claims held that a rate for vehicles with manually engaged front drive axles included vehicles with front drive axles which automatically engage and disengage as driving conditions dictate. *Bolin Drive-A-Way Co. v. United States, 283 F2d 697.*

Referendum to Acquire Plant. Under a statute authorizing cities to condemn privately owned electric facilities, an adverse vote in a referendum election did not constitute a final determination against the acquisition of a plant by an electric plant board or exhaust the powers of the board, a Kentucky appeals court held; nor did the adverse vote preclude the board from resubmitting the question to the

electorate. *Hatchett et al. v. City of Glasgow et al. 340 SW2d 248.*

Need of Shippers. The Pennsylvania superior court held that the evidence which would support the grant of limited motor carrier authority, limited in that it proposed service originating from one or a very limited number of shippers, need relate only to the needs of those shippers, even though the territorial area into which the shipments were to go was extensive. *Chemical Tank Lines, Inc. et al. v. Pennsylvania Pub. Utility Commission, 165 A2d 668.*

Canopies Exempted. The Wisconsin commission exempted two proposed canopies over a spur track from the statutory vertical track clearance requirements upon a showing that the proposed construction would not imperil life and limb and would be in the public interest. *Re Laona & Northern R. Co. 2-R-3896, November 3, 1960.*

Emergency Interim Relief. The California commission granted a telephone company an emergency interim rate increase, pending completion of the entire proceeding, which would produce a return of approximately 5.5 per cent. *Re Kern Mut. Teleph. Co. Decision No. 61027, Application No. 42567, November 7, 1960.*

Water Rate Reduction. The Louisiana commission directed a water company to reduce the block rate applicable to suburban customers, notwithstanding that the overall return being earned was 5.71 per cent on net plant investment, and the return in the suburban division was 2.77 per cent, where the suburban division represented less than 3.5 per cent of the total customers and the reduction would not change the company's overall return to any appreciable extent. *Sherwood Citizens Asso. v. Baton Rouge Water Works Co. Docket No. 8100, Order No. 8259, November 10, 1960.*

Agency Discontinuance Denied. The Wisconsin commission denied a railway express agency's application to discontinue agency service at two stations where the company had failed to show what expenses would be incurred if alternate transportation facilities were used by the shippers. *Re Railway Express Agency, 2-R-3879, November 10, 1960.*

Telephone Rate Increase. The Connecticut commission granted a rate increase to Westerly Automatic Telephone Company upon a showing that additional revenues were needed to provide sufficient funds to maintain efficient operation and provide for necessary expansion in the foreseeable future. *Re Westerly Automatic Teleph. Co. Docket No. 9848, November 21, 1960.*

Extended-area Service. The Illinois commission authorized a telephone company to establish extended-area service between two exchanges upon a showing that there was a community of interest between them. *Re Illinois Consol. Teleph. Co. No. 47115, November 21, 1960.*

Ad Valorem Taxes. The California commission pointed out that the last-known, most-current, announced ad valorem tax is the only reliable rate to use in a rate proceeding. *Re Southern California Water Co. Decision No. 61088, Application No. 42251, November 22, 1960.*

Elimination of Free Exchange Service. The Illinois commission granted a tele-

phone company permission to eliminate free service from one exchange to another upon a showing that substantial savings would accrue by eliminating the necessity for installing terminating equipment upon conversion of the exchanges to dial operation. *Re General Teleph. Co. of Illinois, No. 47195, November 21, 1960.*

REA Loan Considered. The Wisconsin commission granted a telephone company a rate increase which would produce a return of 4.5 per cent on the net book value rate base, and held such return to be reasonable in view of the company's recent loan from the REA at a 2 per cent interest rate and a 35-year term for repayment of principal. *Re Burlington, B. & W. Teleph. Co. 2-U-5431, November 22, 1960.*

Bond Issue. The Ohio commission authorized $450,000 of 30-year, first and refunding mortgage bonds, at 6.75 per cent interest, to be sold to an insurance company, for the financing of construction of water facilities to serve new homes being constructed by the parent company of the issuer. *Re Huber Utilities, Inc. No. 29,847, January 23, 1961.*

Have Baggage Man, Will Not Travel. The California commission held that the Southern Pacific Railroad was not violating a state labor statute by not employing baggage men on passenger trains while such trains were operated with the baggage car or cars sealed. *Re Southern P. Co. Decision No. 61141, Case No. 6542, November 23, 1960.*

Evidence of Revenue Decline. The Pennsylvania commission disallowed a transit company's projected 2 per cent economic decline in passengers where the record showed that as a result of favorable weather and increased railroad commutation fares patrons had been diverted to the company so that the past eight months had not evidenced any patronage decline. *Pennsylvania Pub. Utility Commission v. Philadelphia Suburban Transp. Co. Complaint Docket No. 17362, December 12, 1960.*

Co-operative Membership Fees. A telephone co-operative was permitted, by the Wisconsin commission, to reduce its membership fee of $41 to a fee of $10 and an equity capital deposit of $5, giving customers a credit in the form of equity capital reserve certificates for all amounts paid in excess of $10. *Re Vernon Teleph. Co-op, 2-U-5437, December 16, 1960.*

Sale of Carrier Rights. Improper conduct in obtaining a certificate or an unlawful consummation of control while approval of control is pending does not furnish grounds for disapproving the sale of a carrier's stock to a purchasing carrier, the North Dakota commission ruled. *Re Hart Motor Express, Inc. et al. Case No. S-1410, Sub 1, December 19, 1960.*

Warehouseman Held Public Utility. The California commission held that a company engaged in the warehouse business was a public utility subject to commission jurisdiction where, despite an expressed intention to operate as a private warehouseman, the evidence showed that the company had dedicated its property to the public use and had experienced a frequent turnover in accounts during the period considered. *Re Private Warehouse, Inc. Decision No. 61282, Case No. 6308, December 28, 1960.*

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U. S. Motors 5 to 20 kw capacity Micro Power units will feature new "brushless" generators to eliminate brush and slip ring maintenance requirements. The no-break units will also operate at plus or minus 1 per cent voltage regulation to satisfy increasing sensitivity of critical operating equipment.

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5 KW capacity "diesel" Micro Power units will be available to fulfill growing demand for a thoroughly dependable power supply unit of smaller capacity.

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The most complete selection of Micro Power units ever offered will be ready by the second half of '61. Included will be 1½-3 kw gas, or gasoline units — 5, 10, and 15 kw gas, gasoline, or diesel units — 20, 30, 50, 75, 100, 150, 200, and 300 kw capacity diesel units.

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Intensified design and testing program initiated.

1954
First shipments of 3 KW gas, gasoline Micro Power.

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First shipments of 5 KW gas, gasoline Micro Power.

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First shipments of 10 KW gas, gasoline Micro Power.

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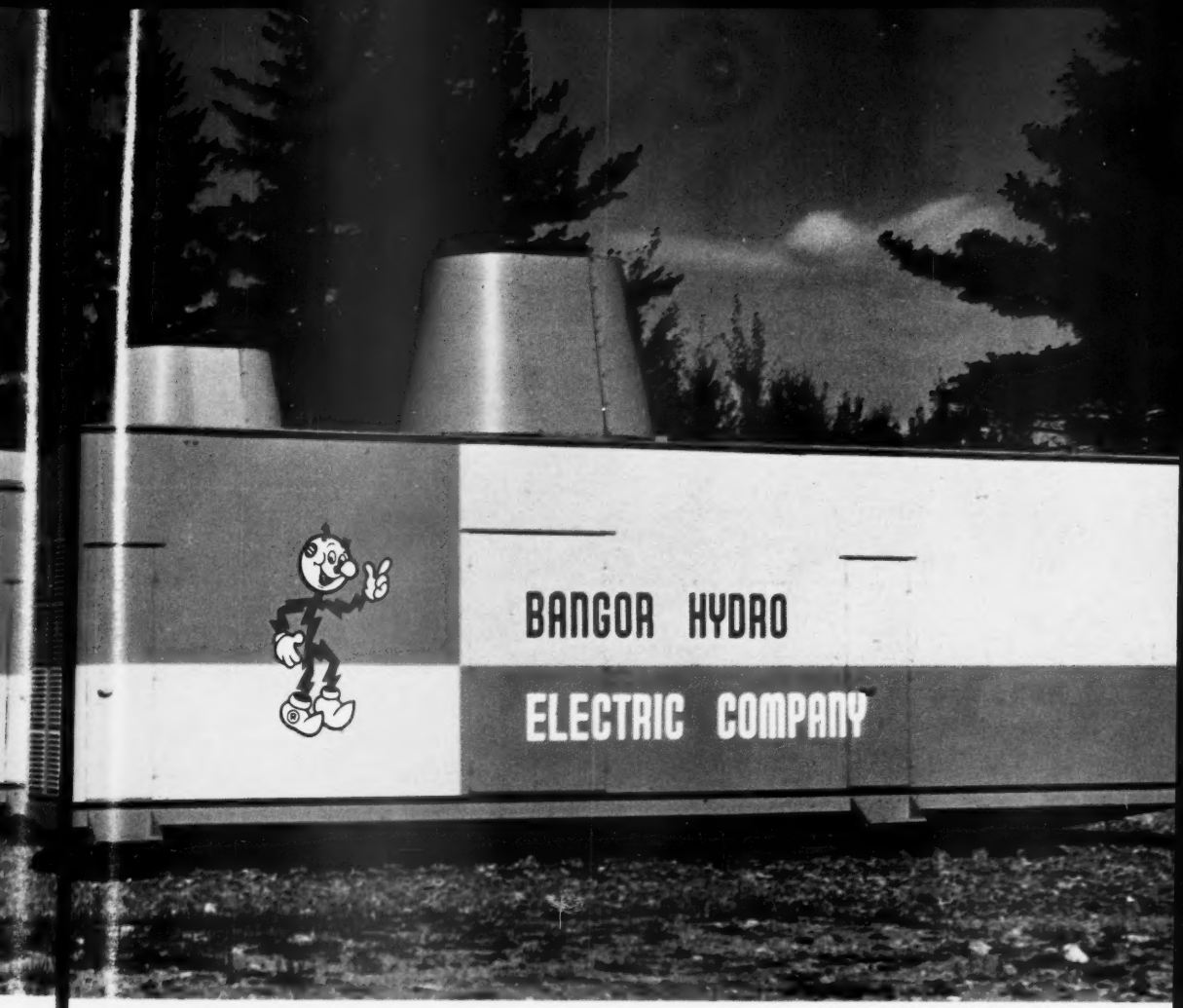
Bangor Hydro-Electric Co. *Again* picks Electro-

In the summer of 1958, Bangor Hydro-Electric Company completed an economic analysis of future generation requirements on its system serving four counties in eastern Maine. With load growth averaging approximately 8,000 KW per year, Bangor Hydro-Electric studied three alternate methods to provide increased capacity for a six year period beginning in 1960:

1. Addition of preferred standard steam plants of 22 MW in 1961 and of 33 MW in 1965 or 1966.
2. Addition of a peak-shaving steam plant in 1961 and a preferred standard steam plant in 1963.
3. Addition of Diesel "end-of-the-line" peaking units in 1960, with similar installations in 1961 and 1962, combined with a preferred standard steam unit in 1964 or 1965.

Conclusions drawn from this study showed large savings could be realized with peak-shaving equipment. The Diesel Plan #3 showed the greatest savings by a considerable margin, varying from $100,000 to $790,000 per year.

ELECTRO-MOTIVE DIESEL PLANT—The initial Diesel peaking unit has been installed at Medway, Me., to provide "end-of-the-line" area protection and peaking service. The 8,000 KW Plant is remotely controlled from the hydro station. To provide area protection, the Plant starts, synchronizes and goes on line, in less than two minutes. Bangor Hydro-Electric picked the Electro-Motive Peaking Plant to produce adequate capacity for its system at lowest possible costs, while improving service reliability in remote areas.



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SECOND ELECTRO-MOTIVE DIESEL PLANT—*The success of the first Electro-Motive Plant at Medway led to the order of a second 8,000 KW plant to be installed in the southern area of the system. Due to be operating by the Fall of 1961, the new plant will also provide additional peaking capacity along with protection for another "end-of-the-line" area.*

FLEXIBLE AND RELIABLE—The inherent design characteristics of the Electro-Motive Equipment at Bangor Hydro-Electric that make it ideal for peaking and area protection, also make these Plants ideal for many of your system requirements. With Electro-Motive Equipment, you get fast start for spinning reserve, automatic dead load pick-up for area protection, remote control for peaking service, portability for simple installation, and freedom from damage to components caused by rapid thermal changes occurring from start to full load.

Electro-Motive Peaking Plants, available in sizes ranging from 2,000 KW to 10,000 KW, permit the most economical and efficient peaking operation, and provide for expansion at the lowest possible cost. Ask your Electro-Motive representative for complete details. 61-U-9

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Industrial Progress

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THERMAL insulations for all types of commercial and industrial requirements, in applications ranging from —400° F to 3000° F, are described in a newly revised 64-page catalog, IN-244A, published by Johns-Manville.

Entitled *Insulation Product Information* (A.I.A. File No. 37-D), IN-244A contains six complete sections, each devoted to a specialized group of Johns-Manville Thermal insulations. These include industrial and high temperature; plumbing, heating, and air conditioning; refrigeration; insulating firebrick and refractories; finishes and weatherproofing materials; and miscellaneous insulations. Three new J-M products, Micro-Bar, Oil-Free Spun Banroc Loose, and Ris-A-Sleev are included, along with more complete data on several older products.

Information on each product consists of an application photo, description, available forms or types, advantages to users, and detailed specification data, including compliance with government specifications and ASTM standards. The type of insulation and its temperature limit are prominently displayed for each product, to facilitate rapid location of pertinent data.

Copies of IN-244A will be supplied through local office upon request, or from Johns-Manville Sales Corporation, 22 East 40th street, New York 16, N. Y.

New Literature Available on New Vinyl Transformer Coating

THE second issue of Concentration —a new quarterly publication, technically written for the electric utility industry—is available from R T & E Corporation.

The winter issue contains detailed information on Armortec, the new *vinyl* exterior coating which replaces paint on all R T & E pole-type distribution transformers. Armortec transformer protection is available on all R T & E pole-type transformer at no additional cost.

For this winter issue of Concentration, and all succeeding issues, write Advertising Department, R T & E Corporation, 1900 East North street, Waukesha, Wisconsin.

Encapsulated Transformers Developed by Moloney For Use on Residential Distribution Systems

A bold new concept of residential transformation is being developed by Moloney Electric Company in co-operation with several utility companies, according to a recent announcement. This new approach to transformation uses encapsulated distribution transformers instead of the present oil filled distribution transformers. Use of these disposable encapsulated transformers eliminates transformer oil, tank, accessories, maintenance and repair. Additionally, the appearance of residential distribution systems is greatly improved.

Moloney Electric began working with encapsulated materials and processing methods in 1953, when they encapsulated coils for electronic applications. In 1957, the information gained from this early experience in encapsulation was applied to distribution transformers as a Moloney Research and Development Project. In 1959, Moloney encapsulated distribution transformer core-and-coil units and these units were installed underground. These transformers are connected for a continuous bucking heat run and have now completed more than a year of operation. During this time, Moloney Research and Development personnel have periodically measured both the temperatu : of t units under test and the tem eratu of the surrounding filler.

The experience gained f m e capsulating electronic units nd t subsequent research and deve opme on encapsulating distributio tra formers has resulted in the evelo ment of new encapsulating pr cess materials, fillers and insulatio stru tures. These new materials and pr essing methods and the perform n of the units under test, give Molon confidence that encapsulated distrib tion transformers can be successfu applied to residential distributi systems.

Moloney Electric Company h joined with several utility compani located in various parts of this cou try in encapsulation transform studies and experimental program These experimental programs are d rected toward finding the answe pertaining to installation costs, met ods of application, and proper d signs for the various types of system At the present time, there are fi basic methods of installation bei investigated.

Nomograph Approximates Cos Of Atomic-Hardened Structure

A nomograph for computing pprox imate costs of building atom c-hard ened structures, may be obtai ed fr e of charge from Burns and R e, Inc New York City engineers a d co structors. The four-color ch rt an supporting data were deriv d em pirically from records of a ual in stallations.

With the nomograph, arch ectura and structural engineers may stimat rough costs for three major pes o buildings: rectangular, arc , an dome. Length of span for e h typ structure, and design overp essure are variable parameters that re use to determine costs graphic ly. In structions in the use of th nomo

ph are included, as well as a table cribing additional costs per sq. ft. archi ectural, mechanical and elec- al services.

For a free copy of the nomograph information on designing atomic- dened structures, write to Publi- ions Dept., Burns and Roe, Inc., West Broadway, New York 13, Y.

wo Utilities Order Nineteen 230-KV Air-Blast Breakers

VO utilities have ordered 19 air- st power circuit breakers rated 230 ovolts from General Electric's gh Voltage Switchgear Depart- nt, General Manager Donald L. eman has announced. Delivery is eduled for early this year.

Fourteen of the breakers are to be d on Southern California Edison mpany's transmission system serv- the Los Angeles area. The bal- e will be placed in service by Pub- Service Electric and Gas Com- y, Newark, N. J. Both companies e energized air-blast breakers of s rating, reportedly the first 230-kv r-Blast interrupters furnished by American manufacturer.

The Southern California Edison der follows an extensive testing ies which the utility conducted at eir Laguna Bell station on two G-E blast breakers.

The five additional breakers for ublic Service Electric and Gas Com- y of New Jersey will be installed three different switching stations as rt of an expansion program now derway.

According to Mr. Beeman, the new pe ATB air-blast breaker line was troduced to the market to meet util- requirements for compact, more ficient equipment requiring lower aintenance and operating costs than onventional oil-filled breakers. While perating efficiency improvements are ontinually being made in the con- entional oil-filled high voltage break- designs, the inherent characteristics oil designs will likely preclude fur- her substantial savings in installa- on and maintenance economies, he aid.

Since the introduction of the air- last breaker, General Electric has re- ived orders for more than 100 pro- uction breakers in ratings from 115 230 kv from utility and industrial sers; over a third of which have een shipped and installed. Air-blast reaker ratings are also available for rotection of 345-kv and 460-kv sys- ems.

Anaconda Issues Brochure On Densheath 900

THE Anaconda Wire and Cable Company has just published a new brochure covering specification requirements and allowable current-carrying capacities for Densheath 900.

The new publication provides quick-reference data usable in most applications of this high-temperature (90 C), superior-quality industrial wire. Densheath 900 may be used for general purpose power and lighting, high-temperature applications, control and switchboard wire, building wire, machine-tool wire, and appliance wire.

Copies of the brochure (DM-6030), may be secured by writing Anaconda Wire and Cable Company, 25 Broadway, New York 4, N. Y., Department, EFL-P.

Gulf States Utilities Plans $46,000,000 Program in 1961

A 1961 construction budget of $46 million was announced recently by Roy S. Nelson, chairman of the board and president of Gulf States Utilities Company. The 1961 expenditures are part of a $195 million four-year construction program to provide ample electric power to meet the rapidly growing requirements of the company's 28,000 square mile service area.

The four-year program includes the construction of the new Sabine station at Bridge City, Texas, where two 220,000 kilowatt units are to be placed in service, the first in 1962 and the second in 1963. Two additional units of 220,000 kilowatts each are to be installed at the Willow Glen station, near Baton Rouge, Louisiana, with the first to be in service in 1964, and the second in 1965. When completed, these new units will increase the company's generating capability to 2,381,000 kilowatts.

Of the $46 million expenditure to be spent in 1961, approximately $27 million will be earmarked for projects under way prior to 1961, and the balance for new work to be started this year.

In commenting on the expansion program, Mr. Nelson said that this large expenditure reflects Gulf States' confidence in the continuing industrial growth and expansion throughout the company's service area. The company, in keeping abreast of increasing demands for power, has in the past ten years invested more than $315 million in adding new facilities and enlarging existing ones.

Brochure Describes New High Voltage Insulator

LAPP'S line of high voltage insulators called "Struts" are described fully in "Controlled Position Construction," a new 16-page brochure available on request from the Lapp Insulator Co., Inc., Le Roy, New York.

The brochure, No. 478-R, contains complete catalog information on these multipurpose insulators, including description, sizes, ratings and drawings plus photographs of the insulators showing their application. Lapp Strut insulators are used with standard suspension construction to control conductor position in converting short crossarm structures to higher voltages, for controlling long jumper loops, for preventing conductor swing on angle construction and similar applications where controlled conductor position is essential.

G-E Appointment

ROBERT C. SPENCER, JR. recently was named supervisor of turbine steam design engineering at General Electric's Large Steam Turbine-Generator Department.

He succeeds Henry Hegetschweiler who was appointed to a newly created post, manager of the department's export sales.

VEPCO Plans $85 Million Program in 1961

THE board of directors of the Virginia Electric a Power Company recently approved a 1961 constructi budget of $85 million, the largest in the company's 5 year history.

Vepco President A. H. McDowell, Jr., said th year's budget is $28,064,000 more than the $56 936,0 spent last year. He said, "the record-breaking budg is necessary to keep pace with the rapid growth in o service area and to provide a constant and dependab source of energy to our customers."

An estimated $23,300,000 will be spent this year f construction on the company's $50 million 200,0 kilowatt hydro electric project now under constructi on the Roanoke river in North Carolina. The dam, f this project, eight miles upstream from Vepco's Roa oke Rapids dam, will impound a reservoir of 34 mil with a shoreline of over 350 miles.

Major items of expenditure include $57,823,000 f generating facilities; $24,238,000 for electric transmi sion and distribution facilities, and $2,852,000 f mains, production equipment and service facilities f gas operations on the Peninsula and at Norfolk.

Mr. McDowell said Vepco plans to spend approx mately $17,300,000 of this year's budget for a four unit at the Possum Point power station, near Quantic Va. The Portsmouth station will require $16,800,0 for work on its fourth unit. Both units are schedul for completion in the spring of 1962, and each will ha a name plate capacity of 200,000 kilowatts. The Possu Point station's first unit of 60,000 kilowatts went on t line in 1948. The Portsmouth station went into oper tion in 1953 with a capacity of 90,000 kilowatts. T combined name plate capacity of these stations, wh the new units are installed, will be 970,000 kilowatts

Last year, Vepco put on the line the latest additi to its Chesterfield power station. The addition at Ches erfield, also a fourth unit, has a capacity of 170,0 kilowatts and cost approximately $20,800,000. Chester field's name plate capacity is now 370,000 kilowatts

Vepco will have a total system-wide capacity of 2 670,000 kilowatts when all of the units now und construction are placed in operation.

Arkla Expects Gas Air Conditioning's "Marke Eligibility" to Nearly Quadruple in Next Year

AN expanded range of unit capacities and a major al sorption design "breakthrough" are expected nearly quadruple the gas industry's air conditioning "mark eligibility" during the next year, according to an offici of Arkla Air Conditioning Corp.

W. G. Wepfer, Arkla's general sales manager, to a press conference at the 15th International Heatin and Air-Conditioning Exposition and ASHRAE mee ing in Chicago recently that, while gas possessed un capacities and designs to compete in only about 2 per cent of the total central-system market in 1960, anticipates being able to compete for about 80 per cen of the market by a year or so from now.

Arkla showed engineering models of the first thre of at least nine new gas-fired small-tonnage uni planned for introduction during the next year.

White Motor Announces New Utility Cab

ANNOUNCEMENT of a new cab that provides com fortable seating with full leg room for four men ha

(*Continued on page 212*)

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been made by H. J. Nave, executive vice president of The White Motor Company in charge of the White Truck Division. Designed and engineered for the utility industries, the new cab is of all steel construction and is for use on the company's 3000 Series chassis.

According to Mr. Nave, every consideration in the development of the new cab has been given to meeting the work requirements of the utilities. By providing comfortable quarters in the cab for the crew, more space can be made available in the load compartment for service tools and equipment resulting in a single work unit designed for extreme utility and maneuverability.

Steering column and vehicle controls are all located at the extreme left of the cab to provide ease of handling for the driver. The driver's seat is fully adjustable with movement allowed in three directions. The additional three man seat is fixed with a flat floor providing adequate leg room for comfortable seating.

H. D. Weller, vice president-sales said the new four man cab on the company's 3000 Series chassis is available with White Mustang engines of from 130 to 185 horsepower, and a wide selection of transmission combinations, rear axles, wheelbases and frame types.

Northern Illinois Gas Plans $215,000,000 Program

NEW records in most phases of Northern Illinois Gas Company operations during 1960 are recounted in NI-Gas' recently released annual report.

Operational highlights included placing NI-Gas' Troy Grove underground natural gas storage reservoir (about 80 miles southwest of Chicago) in regular operation. This, plus a 19 per cent increase in daily firm gas supply, enabled NI-Gas to remove all restrictions on the use of gas for space heating through 1961.

NI-Gas added 101 million cubic feet to its daily firm gas supply and has 70 million more on order for the 1961-62 heating season.

New customers added during 1960 totalled 43,559, according to the report—a new one-year record gain. From these and from old customers, NI-Gas showed a gain of 76,900 customers who use natural gas for heating. Now 437,700 (about 61 per cent of its 716,200 customers use gas for heating.

NI-Gas' share of withdrawal capacity of the Herscher underground storage field (near Kankakee) was increased 25 million to 210 million cubic feet a day this winter, which helped NI-Gas establish an all-time one-day record high of 886.3 million cubic feet for the 24 hours ending noon on December 23.

Construction outlays in 1960 were $50 million, including $9.4 million for the 75-mile pipeline between the Troy Grove reservoir and LaGrange. The total was $9.5 million higher than in 1959.

NI-Gas plans a $215 million construction program for the five-year period 1961-65. This includes $ million for further development of underground storage facilities and for transporting stored natural gas to the distribution system. As much as $1 million of this may come from outside sources.

Included in the five-year construction estimates are plans for a new general office about five miles north east of Aurora. This new building located at Illinois Route 59 and

st-West Tollway, will house an ctronic data processing system ich has been ordered for 1963 de- ery. A new division headquarters Glenwood (about 10 miles south Chicago) to house NI-Gas' south burban activities was completed e last year.

I-T-E Completely Redesigns 13.8-KV Circuit Breakers And Switchgear

compl tely new design of 13.8-kilo- t circuit breakers and switchgear first equipment in this voltage rat- g developed specifically for the jor advantages of stored-energy sing — has been announced by T-E Circuit Breaker Company. The new 13.8-kv equipment intro- tion marks completion of re-design I-T-E's entire line of power cir- t breakers to incorporate stored- rgy systems. The complete line includes K-Line low-voltage breakers, which were introduced in 1957, and 4160-volt equipment introduced in 1960.

The breakers—first 13.8-kv units designed exclusively for stored-energy closing—also incorporate face-wound blowout coils throughout the four interrupting ratings of 250,-500-, 750-, and 1000-mva. They afford faster fault interruptions, faster closing of contacts, and smaller size than any other comparable equipment available today in the 13.8-kv field.

The result is a major advance, throughout the I-T-E power circuit breaker line, in terms of greatly improved fault protection, increased safety for personnel and equipment, higher reliability, virtual elimination of the need for pre-operating adjustments, enormously improved ease of handling and simpler installation, maintenance and service.

The types of switchgear construction available include the conventional indoor arrangement, and two types of outdoor configurations: standard enclosed and full walk-in.

A-C Releases Handy "Transformer Tips" Manual

A 52-page pocket manual of general information, operating and maintenance tips and connections for pole type distribution transformers is now available from Allis-Chalmers.

The 3⅝ by 6⅞-inch booklet also carries tables and charts covering pole-type transformers 167 kva and smaller, 15,000 volts and below. Its contents are particularly directed to distribution system operating personnel and should be helpful as a training aid.

Copies of "Transformer Tips," 61X9659, are available on request from Allis-Chalmers, Milwaukee 1, Wisconsin.

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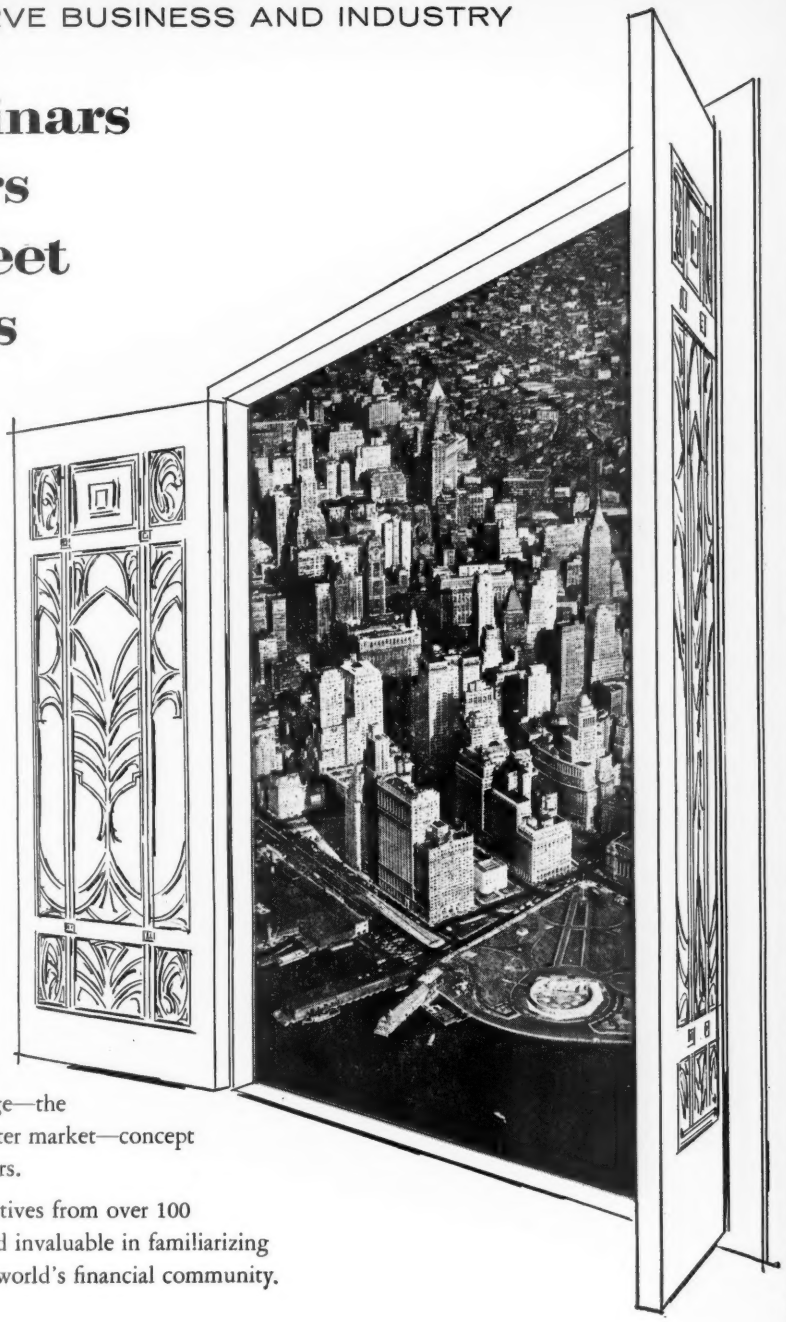

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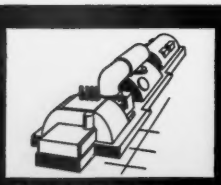

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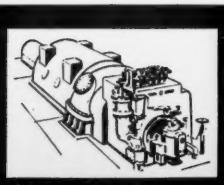

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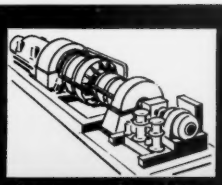

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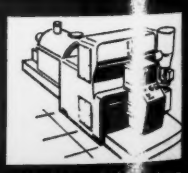

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